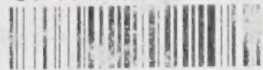


CFTRI-MYSORE



630

Complete book of

COMPLETE BOOK OF
Home Canning

COMPLETE BOOK OF
Home Canning

*Including Preserving, Pickling,
Dehydration and Jelly-Making*

104

BY

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NEW YORK
GREENBERG : PUBLISHER

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GREENBERG, PUBLISHER, INC.

First Printing, April, 1943

Second Printing, May, 1943

Third Printing, June, 1943

688 ✓

THIS IS A WARTIME BOOK

In accordance with the regulations of the War Production Board, the format of this book has been designed to save paper and other materials essential to the war effort. Although this volume may be smaller in bulk, have fewer pages, narrower margins, or other features not found in peacetime books, its contents are complete and unabridged in every respect.

F83:7:Z1 (090)

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CFTRI-MYSORE



688

Complete book of..

MADE IN THE UNITED STATES OF AMERICA

Introduction

THERE is no greater satisfaction to be found in any branch of homemaking than the satisfaction that is experienced by the woman who has placed the last neatly labeled jar on the well-filled shelves of her preserve closet. There, in trim rows, as witness to her foresight and ability, stand jars and cans filled with the fruits of the harvest. The color and fragrance of summer are imprisoned in these jars, to be released when fall and winter threaten to disturb the variety of home menus—ruby-red beets, golden corn, emerald-green beans and asparagus—jewels of real worth when evaluated in terms of health.

The homemaker who never has tested her own skill in the field of home canning will experience a brand-new thrill. Old hands at this work always rediscover each year, at the end of the canning season, the deep sense of contentment that comes with the knowledge of plenty within the house.

This country was founded on habits of thrift that years of easy living almost obliterated. Now, at long last, American families are finding again the joys of self-sufficiency and independence that their ancestors took for granted. Now vegetables grow where only grass and flowers grew before! The seed catalogue is the new book-of-the-month. The feel of the "good earth"—the satisfaction of ripening crops—the harvest thanksgiving—the thrifty "putting down" of surplus foods against the lean days of winter—good, old-fashioned virtues have suddenly become as modern as today!

From now on, let us show our gratitude for a land of plenty by making the soil yield us its bounty and by storing some against the lean months. Home canning is easy. Master a few simple rules and you will wonder why you never took this step before!

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COMPLETE BOOK OF
Home Canning

Home Canning Is Fun

NOW, and doubtless for years to come, every square foot of earth will be made to yield its bounty of fruits and vegetables. Schools will take over plots of ground, suburbanites will grow food instead of flowers, even if they must rent extra land to do it, farmers will plant every acre to fullest advantage with an eye to a bountiful surplus. Whole families will discover that gardening is more fun than they ever imagined, paying rewards in health and tangible assets that other outdoor sports failed to provide. There will be fresh garden produce on the table all summer long, and, in the preserve closet, an ever-increasing array of jars that store the surplus against the day when the last bean is stripped from the vines.

In many neighborhoods there will be "canning bees," held in church or community house or school kitchens. Every homemaker will bring along the "garden truck" she intends to can, together with jars, rubber rings, etc. Every available steam pressure cooker will be pressed into service, so that the job can be done quickly, efficiently and *safely*. Tongues will wag and laughter will lighten tasks all day long, as neighbor works with neighbor. And when evening comes, the fruits of labor will be carried home triumphantly.

Whenever possible, it is more fun to work with a group, even if only two or three homemakers can get together in the largest, most convenient home kitchen one or two days a week during the canning season. Work goes faster when there is talk and companionship and a feeling of working together. But even if one works alone there is nothing arduous about home canning. The best rule is not to undertake too much in any one day, particularly if you are inexperienced. A few jars, carefully and safely canned every day, are sure to keep un-

spoiled, whereas many jars hastily prepared by a tired, nerve-wracked homemaker are not apt to prove a good investment. Carelessness, haste, and overwrought nerves are all enemies of the home canner.

THE CANNING BUDGET

At the start of the canning season, a canning budget should be worked out. The homemaker must consider several points in planning this budget—the size of her family, the foods that are available for canning, and the number of weeks when fresh foods are not available. State Agricultural Colleges will help homemakers with this planning, upon request.

Some authorities suggest putting up one hundred quarts for each member of the family. Roughly one-third of each hundred quarts should be fruits, one-third vegetables (particularly green and leafy vegetables) and one-third tomatoes or tomato juice.

Whether it is practical to plan to put up meats, fish or poultry depends upon the source of supply. On farms where slaughtering is done on the premises, it is wise and economical to can the surplus. In localities where fish can be canned soon after the catch is landed, well and good, but if there is any doubt concerning the freshness of fish, it is foolish to attempt to can it.

City dwellers who must pay high prices for garden produce of dubious freshness, and who have no cool, dry, storage closet, would be foolish to insist on canning large quantities of food of any kind. It is to release commercially canned food to them, and to others who have no way of putting up food, that others, who are more fortunate, must can foods at home for their own consumption.

FRESHNESS COUNTS

Ideally, fruits and vegetables should be canned within two hours of gathering, so it is best to pick only as much as may be comfortably canned in a given day. If, for any reason,

foods must be held over, they should be kept in a cool, dry place, or, best of all, in the refrigerator.

ENEMIES OF FOOD

All fruits, vegetables and meats contain substances called *enzymes*, put there by nature to cause natural ripening. In the case of meats, the enzymes have a tenderizing action. However, if the action of these enzymes is not checked by cooking or canning, the ripening process goes beyond the point of desirability and causes decay and rot. So enzymes cease to be friends and become enemies.

Yeasts and molds are microscopic organisms that are present everywhere—in the air, in water, and in the soil. If they are not checked, they cause foods to spoil. Heat will kill them, but unless the food is protected from the air thereafter, it will become recontaminated. In canning, the heat of processing kills yeasts and molds, and sealing keeps air out until the jars or cans are opened for use. If the jar or can is defective, or if the seal is imperfect, yeasts and molds will get in, via the air, and cause the contents to spoil. That is one reason why it is poor economy to use chipped jars or poor quality rubber rings for home canning.

Bacteria of many varieties cause spoilage in foods. Some bacteria are "harmless" in that they do not cause sickness and death if eaten, others are virulent and dangerous. But all forms cause spoilage and must be killed by means of heat and prevented from entering after canning by means of sealing.

Several factors must be considered as far as temperature is concerned. Actively growing bacteria are destroyed easily at the temperature of boiling water (212° F.). But at the stage in their life cycle when they enter the spore form and become dormant, they become extremely resistant to heat, and temperatures considerably higher than 212° F. are necessary to destroy them. Furthermore, the natural acid content of foods affects the ease with which bacteria can be destroyed. Acid foods like fruits, tomatoes, rhubarb (which, oddly enough, is

classed as a vegetable), etc., do not need as high temperatures or as long a processing time as non-acid vegetables and animal products. In these non-acid foods, bacteria can be killed only if a *steam pressure canner* is used, because no other method builds up a temperature high enough to destroy them.

Now we are very lucky, because science has removed all the guess work from canning. Painstaking experiments and years of research in laboratories have resulted in time and temperature tables that insure success. These tables should not be taken lightly. We would never ignore the recommended time and temperature for baking a cake. How much more important these factors become when food must be protected against spoilage over a long period of time—when the very health of our families is at stake!

TYPES OF SPOILAGE

Several types of spoilage occur in canned foods when bacteria are not destroyed.

Fermentation produces both acid and gas. Food that has fermented in jars or cans turns sour and looks mushy or "cheesy." Seals on jars often break when the pressure of gas inside the jar becomes too great, and tin cans bulge at one or both ends. If any of these signs are present—*throw away the contents*, without tasting, but either burn or bury them so that farm animals or pets cannot get at them.

Flat-sour is a term that expressively describes the type of spoilage where acid, but not gas, is produced by bacteria. Corn, peas, and beans are particularly susceptible to this form of spoilage. Look for a mushy appearance in the food itself, then smell it. If the odor is flat and objectionable, reject the contents, and destroy as suggested above. *Never taste the contents* to determine spoilage. Better to be on the safe side.

Putrefaction is another kind of spoilage caused by bacteria, and occurs most often in meat, fish, poultry, peas and corn. The food turns soft and its color darkens. The very bad

odor gives fair warning when the jar is opened, but often the gas formed in the jar or can will break the seal, or cause bulging, so that smelling will not be necessary. Again—*do not taste the food. Destroy it.*

Botulinus bacteria are deadly and doubly insidious because they give no warning. They are highly resistant to heat, and the only sure way to destroy them in non-acid foods is with high temperature—so high that it can be reached only in a *steam pressure canner*. No locality is immune to this form of bacteria, but if directions for time and temperature are followed, they will be destroyed.

WHAT ABOUT PRESERVATIVES

Heat, in sufficient degree, is the best preservative. If the necessary degree of heat is reached and if it is maintained for the proper length of time, there will be no need to add chemical preservatives, such as sodium benzoate, salicylic acid and other "canning powders," some of which are more harmful than others in their effect on the human body.

PREPAREDNESS

A bit of forehandedness will pay big dividends when canning time rolls around. A day or so before canning gets underway, do these things:

1. *Check equipment*, large and small, to be sure you have all the necessary tools at hand and in good order (you will find check lists in Chapter 2).
2. *Wash jars and covers*. Use hot soapy water for washing, clear hot water for thorough rinsing.
3. *Discard imperfect jars and covers*. Don't let misguided notions of thrift lead you into believing that nicks and flaws are too small to matter. Spoiled food is costly.
4. *Covers and lids*. Be sure that every jar has a cover that fits perfectly (Plate 2).
5. *If rubber rings* are used, provide a new, resilient ring of good quality for every jar.

FOOD VALUE

Are home-canned foods as nutritious as fresh, cooked foods? Do they have as much food value as commercially canned foods? These are the two questions most frequently asked by anxious home canners.

If fruits and vegetables are canned soon after gathering, if the water in which they were precooked is used in filling the jars and cans, and if foods are processed in the containers, home-canned foods will have as high a food value as those which are canned commercially as far as vitamin content is concerned. Minerals are not destroyed by heat, and if the precooking water is used, no mineral value is lost.

Foods canned according to the procedure outlined above, either commercially or at home, are apt to have a higher vitamin content than foods cooked in a saucepan, because air, the great enemy of vitamins, is shut out during the processing period.



PHOTOGRAPH BY ADAMS STUDIOS

Plate 1. The deep sense of contentment that comes with the knowledge of plenty within the house.



PHOTOGRAPH COURTESY OF BALL BROTHERS COMPANY

Plate 2. Be sure that every jar has a cover that fits perfectly. Use new resilient rubber jar rings of good quality.

Equipment for Home Canning

MANY homemakers hesitate to "put up" foods because they believe that it is a complicated business, difficult to do and requiring elaborate equipment. Actually the reverse is true. Canning differs very little from ordinary cooking, and, with the single exception of the steam pressure cooker, the necessary equipment can be found in any well-stocked home kitchen.

WATER-BATH CANNERS

For canning fruits and acid vegetables a *water-bath canner* is necessary. Of course there are water-bath canners especially designed for this purpose, but a wash boiler, or any large, deep utensil with a tight-fitting cover is a satisfactory substitute. There must be a rack, wooden or wire, made to fit the utensil, but any man who is clever with tools can construct such a rack, or a carpenter will make one cheaply. The rack should stand about 2 inches high, to keep the jars from touching the bottom of the utensil. It should not be made of a solid piece of material, because this prevents good circulation of water under and around the jars. Instead, strips of wood, or metal, or wires should be used (Plate 3).

The utensil itself should be deep enough so that the water level is at least 2 inches above the tops of the jar, with "head room" left between the cover and the water level, to prevent boiling over during the processing period.

Some women, with small families, find it easiest to can a few jars at a time, while they are preparing a meal. In this case, a large kettle with a rack and tight cover makes a satisfactory water-bath, but jars must not be crowded into it, or there will not be free circulation of water. Not more than

3 or 4 quart jars can be processed satisfactorily at one time in a utensil of this kind.

STEAMERS

There are certain utensils on the market called *steamers* which must not be confused with steam pressure cookers. These utensils are ordinarily used for cooking vegetables in steam, rather than water. Water is placed in the lower compartment, to a depth of about 3 inches. Vegetables are placed in cooking dishes which rest on a rack. For canning fruits and acid vegetables a steamer can be used like a water-bath canner, except that the jars are not submerged in water. The lower compartment is filled with water, and the jars are placed on the rack above. Steam circulates around the jars instead of water, but the steam is not held under pressure as it is in a steam pressure cooker.

OVEN CANNING

See Chapter 3—"Methods Explained."

STEAM PRESSURE COOKERS OR CANNERS

A steam pressure cooker is really a canning factory in miniature! It is an essential piece of equipment if non-acid foods such as vegetables, meats, fish, etc., are to be canned at home, because it provides the only *safe* method of canning these foods. It is so designed that the temperature can be raised far above the boiling point of water, which is 212° F., because the steam is confined under pressure. This is the method used by commercial canning factories.

Steam pressure cookers are commonly made of heavy cast aluminum and are strongly built, sturdy utensils. Be sure the one you buy is equipped with these three essentials:

1. *Safety valve*, to allow steam to escape safely, if pressure is too great.
2. *Air outlet* or pet cock (sometimes combined with safety

valve) to exhaust air from cooker and to release pressure after processing.

3. *Pressure gauge*, to indicate steam pressure in pounds.

The cover of a steam pressure cooker clamps on and is held by lugs or a band, which prevents any leakage of steam. As pressure is built up, the temperature rises, as shown in the following table:

<i>Pounds</i>	<i>Temperature</i>
5	228° F.
10	240° F.
15	250° F.
20	259° F.
25	267° F.

Steam pressure cookers for home use are made in several sizes. Choose the size that best meets your needs as far as canning is concerned. The following table indicates the capacity of cookers of various sizes:

<i>Size of Canner</i>	<i>No. 2 Cans</i>	<i>No. 3 Cans</i>	<i>Pint Jars</i>	<i>Quart Jars</i>
18 quart	14	8	8	5
25 quart	16	10	18	7
30 quart	19	12	20	8
40 quart	25	16	24	16

Any size smaller than 18-quart capacity is not practical for canning purposes, and the *pressure saucepans*, excellent for cooking purposes, should never be used for canning.

Each year, before the canning season gets underway, the pressure gauge on the canner should be checked for accuracy. Some State Agricultural Colleges offer this service, and the manufacturers of canners will do the checking if the canner is returned to the factory.

CARE OF PRESSURE CANNERS

Steam pressure canners require a minimum amount of care, but that little is important. The canner should be washed after each use, and particular attention should be paid to the closure surfaces.

The opening in the pressure gauge should be kept clean; a toothpick will do this job nicely. *Never immerse the pressure gauge in water.*

Keep the safety valve in good working condition. If it is of the ball and socket type it should be washed after each use.

Dry the canner thoroughly before putting it away.

ADVANTAGES OF PRESSURE CANNERS

Aside from the important fact that steam pressure canners afford the only safe means of canning non-acid foods, they offer several other advantages. For example, less water is needed, and the short processing time saves time, labor and fuel. Furthermore, not much heat is given off, and since most canning is done in hot weather this is important.

GLASS JARS

The two most common sizes for glass jars are pints and quarts. Half-pints are excellent for marmalade, conserve, relish, jams and pickles. There is a 2-quart size available, but since heat penetration is slow, this size should not be used for non-acid foods.

As for shape, glass jars of all sizes are made either round, or with squared sides. The latter take up less space and are consequently easier to store. Both types may be had with either standard or wide mouths, which are best for whole fruits or meats.

CLOSURES AND SEALS

Glass jars are equipped with a variety of covers and seals. The *original Mason-type cover* is a porcelain-lined metal screw cap, rather difficult to clean, which is used with a rubber ring. If these covers become broken, dented, cracked or loose, they must be discarded. The *new Mason-type cover* is a glass or lacquered metal lid, held in place by screw bands.

Lightning-type covers are glass, held in place with a wire clamp, and used with rubber rings. These covers are easy to

clean and sterilize, and if they are handled carefully to avoid breakage, they are long-lived (Plates 4B and 4D).

The wire clamps can be tightened, when necessary, as follows: Remove the top wire; bend it down in the middle, and bend the sides inward.

Covers with *automatic seals* are also available. The covers themselves are made of metal or glass and are edged with a sealing gasket made of composition material or rubber. The covers are held in place with screw bands or clamps. As jars cool, after processing, the gaskets harden and the seal is completed. These covers can be used only once, but the screw bands or clamps need not be replaced.

Some covers that seal automatically are provided with rubber rings. In this instance only the rubber rings must be replaced (Plate 4C).

RUBBER RINGS

A rubber jar ring is small, but it assumes great importance in successful canning. Its job is to create a vacuum during processing, and to maintain that vacuum until the jar is opened.

It pays to buy rubber rings of finest quality, because unless the rubber is live and resilient the ring will fall down on its job, air will enter the jar, and the contents will spoil.

New rings must be used each year. *Never use a rubber ring a second time, and never use two rings on one jar* just because the cover of the jar fits loosely—or air may work in and spoil the contents of the jar.

Test jar rings before using them, as follows: Pinch the ring together between the thumb and first finger. Then release the ring. If it springs back into shape at once, it is fit for use. If it remains limp, with no come-back, or if it cracks, discard it.

The best way to adjust jar rings on jars is by “rolling” them on, with as little stretching as possible.

GLASS BOTTLES

If glass bottles are used for canning ketchup, chili sauce, juices, etc., it is necessary to use crown caps, and a capping machine for sealing. Follow the manufacturer's directions for the use of the caps and machine.

TIN CANS AND CAN-SEALING MACHINES

If tin cans are to be used for home canning a can-sealing machine is necessary. This machine must be strongly built, efficient and durable. Cheap can-sealing machines are a poor investment. Unless home-canned produce is to be marketed in large quantities, a hand-operated machine is quite satisfactory. Power-driven sealers are available for large quantity canning operations.

Can-sealing machines are easy to operate. Various types are on the market, and the manufacturer's directions for operation and care should be studied carefully and followed exactly for best results.

Some can-sealers are equipped with a device for opening and reflanging cans, so that they can be used more than once—sometimes three times if the work is carefully done.

Can-sealing machines should be wiped off frequently on the days when they are in use, because fruit juices, brine, vinegar, etc., attack the metal and cause corrosion and rusting. When canning is over for the day, the machine should be washed in hot soapy water, rinsed carefully and dried thoroughly.

Rim-seal cans are the most popular style for home canning purposes. This type of can is easy to seal and comparatively inexpensive, even if it is used only once.

Sealing gaskets are made either of paper or rubber. The paper gaskets are bulkier and make effective seals, but they must be kept dry. They are not cemented to the covers and are apt to fall out of the covers unless the operator is careful. Rubber gaskets are cemented to the covers, and moisture does not affect their usefulness.

There are three types of cans available. Plain cans, made of thin sheet steel coated with tin, cans lined with "R" or sanitary enamel, and cans lined with "C" or "corn" enamel. Enamel-lined cans are necessary for canning certain kinds of foods which, when subjected to the heat of processing, release a gas which combines with tin and discolors the food.

"R" enamel is deep gold with a bright finish; "C" enamel is light gold with a dull finish. Each type is designed specifically for certain foods, and the two types are not interchangeable. Foods not listed in the following table may be packed in ordinary tin-coated cans.

"R" or Sanitary Enamel

Beets *	Peas
Berries	Plums
Cherries	Pumpkin
Cranberries	Rhubarb
Fruit juices	Sauerkraut
Grapes	Tomatoes

"C" or Corn Enamel

Beans, kidney	Parsnips
Beans, lima	Succotash
Corn	Squash

Can sizes most commonly used for home canning are No. 2 (2½ cups), No. 2½ (3½ cups) and No. 3 (4 cups).

SMALL EQUIPMENT FOR CANNING

It is quite probable that you will find all or most of the equipment listed below right in your own kitchen.

Brush, vegetable	Jar lifter
Colander	Jelly-bag
Funnel, narrow mouth	Kettles, large
Funnel, wide mouth	Knives, paring

* Pickled beets must be packed in glass only.

Labels	Spatula, narrow
Measures ($\frac{1}{2}$ pint, pint, quart)	Spoons, measuring
Paraffin	Teapot (for melting and pouring paraffin)
Scales, kitchen	Tongs
Scissors	Trays
Sieve	Wrench or tightener for screw tops
Skimmer for jelly	

Time-Saving Gadgets

Apple parer and corer	Meat grinder
Bean cutter	Pea sheller
Cherry pitter	Slaw cutter
Corn kernel cutter	Strawberry huller
Juice press	Vegetable slicer and cuber

Methods Explained

IN AN old recipe for rabbit stew the directions begin: "First, catch your rabbit"! So, the first step in canning is a wise selection of foods to be canned. Fruits and vegetables must be young, sound, clean and *fresh*. The sooner they are canned after gathering, the better.

CLEANLINESS

Cleanliness is vital to successful canning. The food itself must be clean, and so must the containers. Glass jars and caps should be washed in soapsuds and rinsed. While food is being prepared for packing, the jars and covers are placed in a kettle of warm water. The water is brought to the boiling point and then kept hot until the jars are needed. A rack, or folded cloth in the bottom of the kettle, prevents the jars from bumping and breaking during this period. When jars are packed with food and then processed, the jars do not need to be sterilized, although they must be clean and hot when they are filled. But when the open kettle method is used (this method is described farther along in this chapter) the jars and covers must be boiled in water to cover for twenty minutes.

Jar caps that have a sealing composition gasket should have boiling water poured over them before they are used. Let them remain in the water until they are used.

Rubber rings should be dipped in boiling water before being placed on the jars.

Tin cans are washed in soapsuds, rinsed and drained. The lids may be wiped with a damp cloth, but paper gaskets must be kept absolutely dry, to insure a perfect seal.

GRADING AND SORTING

Fruits and vegetables are easier to pack and more attractive in appearance if they are sorted according to size, color and degree of ripeness.

Small fruits or vegetables that are to be canned whole, such as carrots or beets, should be sorted according to size. Peas and lima beans should be sorted into three bowls, one for tiny, young vegetables, one for those of average size, and one for those which are so mature that they are turning yellow. These yellow peas or beans will give the liquid in the jars a cloudy look that is not attractive, and really should be used only for canned purees or soups.

It is important to grade fruits according to ripeness, because hard fruit requires a longer precooking period.

After grading and sorting, wash the fruits or vegetables thoroughly, in several clear waters. Lift the food out of the water each time, rather than pour the water off. In this way, soil is left behind in the water and does not remain on the food.

BLANCHING

Some fruits and vegetables must be blanched in order to loosen the skins so that they will slip off easily. Beets, carrots, tomatoes and peaches fall into this category. The vegetables or fruits are first plunged into boiling water and left for a few seconds; then they are quickly plunged into very cold water. After this treatment it is easy to slip off the skins.

PRECOOKING

Before fruits and vegetables are packed into containers for processing, they are usually cooked for a short time. This precooking shrinks the food somewhat and allows for a closer pack which is more attractive. It also shortens the necessary processing time, because the food is hot when it is packed and placed in the canner.

PACKING

Remove one container at a time from the hot water in which it has been standing. Use a jar-lifter for this job to avoid burns and scalds. If a rubber ring is used, adjust it on the jar before packing, and be sure it rests flat on the sealing surface of the jar.

Pack the food quickly into the container. With the exception of corn, peas and shell beans, all fruits and vegetables should be packed closely, but without crushing, to within $\frac{1}{2}$ inch of the top of the jar. *Corn, peas and shell beans* should be shaken down, to leave 1 inch of head space, because these vegetables swell during processing. *Greens*, such as spinach, chard, kale, etc., should be pressed down lightly, leaving $\frac{1}{2}$ inch of head space at the top, and then cut across with a knife from the top of the jar to the bottom.

If containers are filled too full, there will be trouble when the food expands during processing and storage. If the fill is too slack, on the other hand, too much air is left in the container. Measure head space from a straight edge across the top of the container.

SEASONING—SYRUP—WATER

After each container is packed, add salt if the recipe calls for it. Next add hot water or hot sugar syrup, as the case may be, until the solid material in the container is covered with liquid. Shake the container to distribute the liquid evenly.

AIR BUBBLES

Expel air bubbles from the container this way: Slip the blade of a sterilized spatula around the inside of the container, pressing the food back gently, until all bubbles rise to the surface and break.

“EXHAUSTING” AIR FROM FOODS PACKED IN TIN CANS

All fresh foods hold air within their own tissues. Unless most of this air is removed before foods are sealed in tin cans, the food and the can become discolored and the food loses some of its flavor.

Fruits, tomatoes and meats, when packed raw in tin cans, need special treatment to “exhaust” the air before the cans are sealed. After the raw food is packed in the cans, set them in a water bath, with the tops 2 inches above the level of the water. Keep the water boiling, but see that it doesn't get into the food. Cover the bath to keep the steam inside. Begin to count time when the space above the cans is filled with steam. When time is up, seal the cans while the food is still steaming and process at once.

Non-acid vegetables are precooked before packing, and this cooking drives out air. Thus the air does not need to be exhausted by the above method.

COVERS AND LIDS

As soon as a container is packed, wipe off the rubber ring (if one is used) with a clean, damp cloth. Adjust the cover to achieve a partial seal which exhausts the air in the container during processing.

PARTIAL SEAL

Screw-top or Mason jar. Screw the lid down as firmly as possible without using undue force; then unscrew it about $\frac{1}{4}$ inch (Plate 5).

Lightning-type covers. Put the glass top on evenly; snap the upper wire into the notch on the cover. Leave the side clamp up.

The partial seal does not apply to vacuum, or self-sealing jars or to tin cans.

PROCESSING

As soon as each container is filled and partially sealed, put it in the canner or somewhere where it will keep hot.

Processing means cooking in the container, and should begin as soon as possible after the containers are packed. *Directions for time and temperature in each recipe must be followed exactly* for safety and success. Farther along in this chapter you will find instructions for processing in the water-bath, steam pressure canner, etc.

COMPLETING THE SEAL

At the end of the processing period, remove the jars one at a time, with a jar-lifter, and complete the seal:

Screw-top or Mason jar caps. Screw the cap down as tightly as possible.

Lightning-type covers. Snap the side clamp down.

Covers equipped with sealing gaskets will seal automatically as they cool. Tin cans are completely sealed before processing.

COOLING

Stand *glass jars* upright, out of the way of drafts. Do not cover them with towels or any other material, as this prolongs the cooking of the food in the jars.

Cool *tin cans* in cold water—under running water if possible.

TESTING FOR LEAKAGE

When *glass jars* are thoroughly cool, invert them and watch to see if any liquid leaks out. If so, the jars must be reprocessed (see below). The tops of jars equipped with lacquered metal covers should be tapped with a spoon. A clear, ringing sound means that the seal is complete and perfect. A dull tone shows that a seal has not formed, and the jars must be reprocessed.

REPROCESSING

Any containers that show signs of leakage should be opened at once. Reheat the contents, pack in other containers and process again for the full length of time as stated in the recipe.

LABELING

Wipe all containers that show no sign of leakage, with a clean, damp cloth and dry thoroughly before attaching the labels. Each label should show the name of the product, the date of canning, and the lot number, if more than one lot was canned on the same day. Gummed labels are fine for glass jars. Rubber cement will hold paper labels on tin cans. A pencil that writes on glass may be used, instead of paper labels, on either glass jars or tin cans.

STORING

Let the containers remain at room temperature for a week or ten days, and examine them from time to time for signs of spoilage. If any one container exhibits such signs, look at all containers from that lot with great care.

At the end of this "checking-up" period, store the containers in a cool, dry place. Glass jars should be stored away from light, so the color of the food will not fade.

CAUTION

Before using canned food, inspect it for signs of spoilage. Does it look mushy or "cheesy"? Does it have a stale, flat odor? Does it have a strong, disagreeable odor? Are the ends of the can bulged? If the answer to any one of these questions is "yes," *do not taste the food*. Burn it or bury it so deeply that farm animals or pets cannot get at it.

It is wise to boil all canned foods for at least 5 minutes before serving. Heat sometimes brings out an odor that indicates spoilage which is not noticeable when the food is cold.

HOT PACK VERSUS COLD PACK

Hot pack means cooking foods for a short time before packing and processing. In the *cold pack* method, raw, cold food is packed in the jars, hot syrup or water added, and jars processed.

In the opinion of all leading authorities the hot pack method is preferable, because it is extremely important for heat to reach the center of the jar as soon as possible, and it takes a longer time for this to happen when foods are packed cold.

OPEN KETTLE

When the open kettle method is used, fruits or tomatoes are cooked until tender and then quickly packed in hot sterilized glass jars and sealed at once. The jars should be filled to overflowing to eliminate as much air as possible, and any remaining air bubbles must be expelled with a spatula, as explained earlier in this chapter. It is best to process the filled jars for 5 minutes as a precaution against spoilage. Containers, caps and rubber rings must all be sterilized by boiling when the open kettle method is used.

This method must never be used for non-acid foods of any kind. It is safe only for fruits and tomatoes.

Tin cans cannot be used because the lids cannot be sterilized.

WATER-BATH CANNERS

As we have stated before, a water-bath canner is used for processing only fruits and tomatoes. *Do not use it to process non-acid foods.*

Fill the canner with water to a level at least 2 inches above the tops of containers. Bring the water to a full boil before the containers are lowered into it. During the processing period add more boiling water as often as necessary to maintain the level.

Glass containers must be hot and filled with hot food before

being placed in the boiling water or they will break. Never allow one container to touch another.

Begin to count processing time as soon as the water starts to boil vigorously after the containers are put in. Keep the water boiling hard throughout the processing period.

At the end of the processing period remove one container at a time with a jar lifter and complete the seal if necessary.

STEAM PRESSURE CANNERS

Remember that steam pressure canners are the only safe canners for non-acid foods.

Pour boiling water into the canner until it reaches a level just below the rack. This level must be renewed each time the canner is used.

Load the containers on the rack so that there is space between them. This allows the steam to circulate freely around the containers.

Adjust the cover and fasten it securely. If the cover is fastened on with clamps, fasten opposite clamps fairly tight, one pair at a time. Then repeat this process, tightening each pair completely (Plate 6).

Watch to see that no steam escapes except through the petcock.

Wait until the steam escapes from the petcock in a steady stream, then count four to seven minutes before closing the petcock. In this way you are sure that no air remains in the cooker to lower the temperature.

After closing the petcock, watch the pressure gauge. When it reaches the desired point, regulate the heat to maintain this pressure and start counting the processing time. Do not let the pressure fluctuate during processing. If it does, liquid may be lost from glass containers. Never let the pressure rise so high that the safety valve releases the steam. Never open the petcock.

At the end of the processing period, remove the canner from the heat at once.



PHOTOGRAPH COURTESY OF KERR GLASS COMPANY

Plate 3. Allow space between containers for free circulation of water when using a water-bath canner.



Plate 1A (upper left): Glass jars with self-sealing gaskets. The lids can be used only once, but screw bands need not be replaced.

Plate 1B (upper right): Lightning-type jars used with rubber rings.

Plate 1C (lower left): This type of self-sealing cover is provided with a rubber ring. Only the ring need be replaced.

Plate 1D (lower right): Lightning-type covers are easy to clean and sterilize.

For glass jars and No. 3 cans. Watch the gauge, and when it registers "O" open the petcock *gradually*. When no more steam escapes, open the cooker slowly, tilting the cover away from you to avoid steam burns.

For tin cans smaller than No. 3 cans. Open the petcock gradually and let the steam escape slowly. Then open the canner in the manner outlined above.

Remove glass jars one at a time and complete the seal at once, if necessary. Tin cans may be removed all at once.

If liquid has been lost from glass jars, *do not open the jars to add more*. This loss will not affect keeping qualities.

Never try to cool a pressure cooker quickly with cold water or wet cloths—the canner may crack under the strain.

STEAMERS

Steamers can be used instead of water-bath canners for processing fruits and tomatoes—but *not for non-acid foods*.

Steam, rather than water, circulates around the containers, but the steam is not held under pressure and therefore processing time is not shortened, but is the same as for the water-bath canner.

Pour boiling water, to a depth of about 3 inches into the bottom of the steamer. Set the containers, filled with hot food and partially sealed, on the rack. Cover the steamer.

When steam pours out freely around the cover, begin to count processing time.

From this point on, follow directions for using the water-bath canner, given earlier in this chapter.

OVEN-CANNING

Only fruits and tomatoes can be processed safely in an oven—*never non-acid foods*. Only glass jars can be used—the seams of tin cans may spread or burst. Glass jars using rubber rings should be partially sealed before oven processing. If completely sealed, accumulated steam would break either the

seals or the jars themselves. The bands on self-sealing jars must be screwed on tightly before processing.

The oven temperature must be maintained at from 250° F. to 275° F. because, as steam forms in the jars, it forces its way out and the temperature within the jars stays around 212° F. Processing time periods for oven-canning are half as long again as for water-bath canning, because hot air does not conduct heat as well as water does.

Oven-canning has several disadvantages in addition to the longer processing time. Fruits, especially pears, peaches and apricots, are apt to take on a brownish color that is not attractive. Then, too, liquid is usually lost from the jars despite every precaution.

CANNING AT HIGH ALTITUDES

Water does not always boil at 212° F. As altitude increases, the boiling point of water drops, and allowance for this drop must be made when water-bath canners are used at high altitudes. Above 1,000 feet, processing time should be increased 20 percent for each additional 1,000 feet.

High altitudes affect steam pressure canning, also. Above 2,000 feet, 1 pound pressure should be added for each additional 2,000 feet.

ACID AND NON-ACID FOODS

Since it is so important to process non-acid foods in a steam pressure canner, we must be quite clear as to this classification of foods. The table below sorts foods out into acid and non-acid groups.

(Remember this has nothing at all to do with the *nutritional* classification.)

Acid Foods

All fruits
Tomatoes
Pickled beets

Non-Acid Foods

All vegetables except those
listed at the left
Meats

Ripe pimientos
Rhubarb

Poultry
Fish
Shellfish
Game

The addition of small amounts of vinegar or lemon juice does not change the classification of non-acid foods to acid foods as far as processing methods are concerned. However, if foods are actually *pickled*—packed in a hot vinegar solution—they may be considered as belonging in the acid classification.

How to Can Acid Foods

AS FAR as home canning is concerned, acid foods include all fruits, tomatoes, sauerkraut, rhubarb, and pickled beets.

The best temperature for processing acid foods is 212° F., the boiling point of water at sea level. Therefore the *water-bath canner* is recommended for these foods.

It is wise to select fruits of high quality for canning purposes. Overripe fruit, or fruit showing signs of decay, should not be used.

SYRUPS

Syrup made with granulated sugar is best of all for packing canned fruits. However, in times of sugar shortages it is possible to substitute corn syrup or honey for part of the sugar. It is even possible to can fruits without any sugar, using hot water instead of syrup, although fruit packed this way is not as attractive in appearance. Shape, color and flavor are all better when some sugar is used.

HOW TO MAKE SUGAR SYRUP

Thin Sugar Syrup is used with naturally sweet fruits, or for fruits intended for breakfast service. Medium Sugar Syrup is best for fruits which are not very sour. Heavy Syrup is needed for acid fruits or for fruits which are to be served as desserts.

Syrups can be made in advance, and most homemakers find it convenient to do this a day or two before fruit is to be canned. About $\frac{1}{2}$ cup of syrup is needed for each pint jar, $\frac{3}{4}$ cup for a No. 2 can and 1 cup for a quart jar or No. 3 can.

Thin Syrup. Use 1 cup of sugar to 3 cups of water. Cook

over low heat, stirring constantly until sugar dissolves. Boil 5 minutes.

Medium Syrup. Use 1 cup of sugar to 2 cups of water; proceed as for Thin Syrup.

Heavy Syrup. Use 1 cup of sugar to 1 cup of water; proceed as for Thin Syrup.

Spiced Syrup (for peaches, pears, apricots, etc.). Dissolve 3 pounds sugar, brown or white, in 1½ quarts vinegar, mixed with 1 pint water. Tie 1 tablespoon each whole cloves and broken stick cinnamon and 1½ teaspoons ground ginger in a muslin bag and add to sugar mixture. Boil 5 minutes. Let stand 24 hours. Strain.

CANNING WITHOUT SUGAR

Fruit packed in water has a tendency to shrink and float. For this reason, juicy fruits should be canned in their own juice, rather than in water. To do this, extract juice from the riper fruits and use this juice instead of water. Crush the ripe fruit, heat slowly until the juice is extracted, and then strain. Pack the remaining fruit, precooked if desired, closely into containers and fill the containers with boiling hot juice. *Berries, cherries, currants and plums* can be packed in this way.

Other fruits which are less juicy can be packed in water. Pack the fruit firmly, so that as little water as possible is needed. Follow the recipes given in this chapter, using boiling water instead of syrup.

SUGAR SUBSTITUTES

If a sugar shortage exists, *Thin Syrup* may be used successfully in any of the recipes in this chapter. In fact, many people really prefer the delicate flavor that Thin Syrup imparts.

Light corn syrup may be used for part of the sugar in making syrup. The best flavor and consistency result from using half each of sugar and corn syrup.

Honey may also be used for part of the sugar, up to half, but imparts its own flavor to the syrup. Add honey to hot

syrup *after boiling*, in order not to change the flavor of the honey.

YIELD

The following table will help the homemaker to estimate approximately how many containers can be filled from a given amount of raw fruit:

<i>Fruit</i>	<i>Amount, Raw</i>	<i>Amount Canned</i>
Apples	2½ pounds	1 quart
Apples	1 bushel	20 quarts
Apricots	15 pounds	6 quarts
Berries	1¼–1½ pounds	1 quart
Cherries	1¼–1½ pounds	1 quart
Crabapples	1 pound	1 quart
Peaches	2–2½ pounds	1 quart
Pears	2–2½ pounds	1 quart
Plums	1½–2 pounds	1 quart
Tomatoes	2½–3½ pounds	1 quart

OPEN KETTLE METHOD

The open kettle method can be used for fruits, rhubarb or tomatoes, if desired (see Chapter 3).

BERRIES OR PITTED CHERRIES

Measure fruit into a large kettle. Add ½–1 cup sugar for each 4 cups (1 quart) of fruit. Let stand about 3 hours. Bring to a boil and boil 5 minutes. Fill, boiling hot, into hot sterilized glass jars. Seal at once.

OTHER FRUITS

Cook fruit in Medium Syrup until tender. Pack, boiling hot, into hot sterilized glass jars. Seal at once.

TOMATOES

Blanch; peel; cut in quarters. (Remove hard cores.) Heat slowly to boiling, without adding water. Add 1 teaspoon salt

for each quart of tomatoes; boil 20 minutes. Fill, boiling hot, into hot sterilized glass jars. Seal at once.

PASTEURIZING FRUIT JUICES

You will find recipes for canning fruit juices and tomato juice farther along in this chapter. Many authorities feel that the flavor of juices is improved if they are *pasteurized* rather than processed after bottling.

To pasteurize, place the bottles or jars on their sides on the rack of a water-bath canner, stacking if necessary, with folded cloths between layers. Add warm water to cover and heat to between 175° F. and 185° F. Use a thermometer for best results. Hold at this temperature for 20–30 minutes. Remove at once from the hot water and set upright, out of the way of drafts, to cool.

RECIPES FOR CANNING ACID FOODS

APPLES

PREPARATION—Select a tart variety for best results. Pare, core, slice or quarter. Remove bruised or discolored spots. Drop into a salt-vinegar solution to prevent darkening (use 2 tablespoons each salt and vinegar to 1 gallon of water). Drain and rinse before precooking.

PRECOOKING—Cook in boiling Thin Syrup 5 minutes. (If apples are packed raw they shrink during processing.)

PACKING—Pack, boiling hot in clean, hot containers. Fill containers with hot syrup.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a water-bath canner 5 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

APPLES, BAKED

PREPARATION AND PRECOOKING—Bake apples as for serving.

PACKING—Pack hot in clean, hot containers. Fill containers with boiling hot Thin Syrup or Spiced Syrup.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a water-bath canner 5 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

APPLESAUCE

PREPARATION AND PRECOOKING—Prepare applesauce according to your favorite recipe, using “windfalls” or green apples, if desired.

PACKING—Pack, boiling hot, into clean, hot containers.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a water-bath canner, 6 minutes for unstrained applesauce; 10 minutes, if strained.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

APPLES, PIE FILLING

PREPARATION—Select a tart, firm variety for best results. Pare, core and slice. Remove bruised or discolored spots. Drop into a salt-vinegar solution to prevent darkening (use 2 tablespoons each salt and vinegar to 1 gallon of water). Drain and rinse.

PRECOOKING—Cook 5 minutes in boiling water.

PACKING—Pack, boiling hot in clean, hot containers. Fill containers with boiling water.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a water-bath canner using the following time periods: Pint and quart jars—15 minutes; No. 2 and No. 3 cans—10 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

APRICOTS

PREPARATION—Select fully ripe, firm apricots. Immerse in boiling water $\frac{1}{2}$ minute; plunge into cold water; slip off skins. Cut in halves; remove pits.

PRECOOKING—Cook in boiling Medium Syrup 3–5 minutes. If desired 1 cracked apricot pit may be added for each quart of syrup, then discarded.

PACKING—Pack, boiling hot, in clean, hot containers. Fill jars with boiling hot syrup.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a water-bath canner 15 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

BEETS, PICKLED

PREPARATION—Wash thoroughly; cut off tops, leaving roots and 1-inch stems. Plunge into boiling water; let stand $\frac{1}{2}$ minute; plunge into cold water. Slip off skins; remove roots and stems. If beets are to

be packed whole, grade according to size. If not, cut in quarters or slice.

PRECOOKING—Prepare a mixture of half water and half vinegar. Add salt, pepper and sugar to taste. Bring to a boil; add beets; boil 5 minutes.

PACKING—Pack beets, boiling hot into clean, hot glass jars. Fill jars with boiling hot vinegar mixture.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a water-bath canner 30 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool dry place.

BERRIES—METHOD I

(except strawberries)

PREPARATION—Avoid crushing. Pick over, wash, hull or stem.

PRECOOKING—Add 1 cup sugar to each quart of berries. Heat slowly to boiling; boil 3-4 minutes, stirring gently. Let stand overnight. Re-heat to boiling.

PACKING—Pack, boiling hot, into clean hot containers.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 5 minutes.

COMPLETE SEAL—Follow directions for type of container you are using.

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

BERRIES—METHOD II

(except strawberries)

PREPARATION—Avoid crushing. Pick over, wash, hull or stem.

PACKING—Pack raw berries in hot, sterilized containers. Fill containers with boiling hot Medium Syrup (made with berry juice instead of water, if desired). If tin cans are used, exhaust 3–5 minutes.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a water-bath canner, using the following time periods: Pint and quart jars—20 minutes; No. 2 and No. 3 cans—15 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

BLUEBERRIES

(packed without liquid or sugar)

PREPARATION—Pick over, wash and stem.

PRECOOKING—Place 1–3 quarts of berries in a square of cloth and hold in boiling water about 30 seconds, or until spots of juice show on the cloth. Plunge into cold water.

PACKING—Pack into clean, hot containers as tightly as possible without crushing. If tin cans are used, exhaust 3–5 minutes.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a water-bath canner, using the following time periods: Pint jars and No. 2 cans—16 minutes; quart jars and No. 3 cans—21 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

CHERRIES, SOUR—METHOD I

PREPARATION—Wash, stem, pit if desired. Inspect carefully. If not pitted, prick with tines of fork to prevent shrinkage (save juice to use in making syrup).

PACKING—Pack raw in hot, sterilized containers. Fill jars with boiling hot Heavy Syrup (made with cherry juice instead of water, if desired). If tin cans are used, exhaust 3–5 minutes.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 25 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

CHERRIES, SOUR—METHOD II

PREPARATION—Wash, stem, pit. Inspect carefully.

PRECOOKING—Add sugar to taste. Bring slowly to a boil; boil 3–5 minutes.

PACKING—Pack, boiling hot into hot sterilized containers.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a water-bath canner 10 minutes.

COMPLETE SEAL—Follow directions for type of container you are using.

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

CHERRIES, SOUR—METHOD III

PREPARATION—Wash, stem, pit. Inspect carefully.

PRECOOKING—Boil cherries in Heavy Syrup 7 minutes. Let stand overnight. Reheat to boiling.

PACKING—Pack, boiling hot in hot sterilized containers. Fill containers with boiling hot syrup.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 5 minutes.

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

CHERRIES, SWEET

Sweet cherries are usually canned whole, without pitting. The skins should be pricked with the tines of a fork, to prevent excess shrinkage. Any of the three methods outlined for sour cherries may be used, substituting Medium Syrup for Heavy Syrup.

CRANBERRY SAUCE, WHOLE BERRY

PREPARATION AND PRECOOKING—Make cranberry sauce according to your favorite recipe.

PACKING—Fill, boiling hot into clean, hot containers.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 5 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

CRANBERRY SAUCE, STRAINED

Strain cranberry sauce; reheat to boiling; proceed as above.

CURRENTS

PREPARATION—Wash; pick over; remove stems.

PACKING—Pack clean, hot containers brimful, pressing down gently. Fill containers with boiling hot Medium or Heavy Syrup. If tin cans are used, exhaust for 3–5 minutes.

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PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 20 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

FIGS

PREPARATION—Select fully ripe figs; handle gently. Dissolve 1 cup baking soda in 4 quarts boiling water; pour over 6 quarts of figs; let stand 5 minutes. Drain; rinse thoroughly.

PRECOOKING—Add 2 quarts boiling Medium Syrup; simmer 1 hour.

PACKING—Pack boiling hot, in clean, hot containers. Fill containers with boiling Medium Syrup.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 5 minutes.

COMPLETE SEAL—Follow directions for type of container you are using.

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

FRUITS, MIXED (for salads or fruit cup)

PREPARATION—Combine equal quantities of any combination of the following fruits: (1) apples, cut in eighths or diced; (2) apricots, halved, quartered or diced; (3) grapefruit, sectioned or diced; (4) grapes, stemmed, seeded if necessary; (5) *maraschino cherries* (a few for color); (6) peaches, halved, quartered or diced; (7) pears, halved, quartered or diced.

PACKING—Pack mixed fruits into clean, hot containers. Fill containers with boiling hot Thin Syrup. If tin cans are used, exhaust 5 minutes.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 20 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

GOOSEBERRIES—METHOD I

PREPARATION—Trim; sort; wash; prick with fork to reduce shrinkage.

PACKING—Pack gooseberries into clean, hot containers, pressing down lightly. Fill containers with boiling hot syrup (Medium for ripe gooseberries, Heavy for green gooseberries). If tin cans are used, exhaust 3–5 minutes.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a water-bath canner using the following time periods: Pint and quart containers—20 minutes; No. 2 and No. 3 cans—15 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

GOOSEBERRIES—METHOD II

PREPARATION—Trim; sort; wash.

PRECOOKING—Add a small quantity of water; boil until gooseberries are reduced to a pulp; measure. Add $\frac{1}{2}$ cup sugar for each quart of pulp. Stir over low heat until sugar dissolves. Bring to a boil.

PACKING—Pack, boiling hot into clean, hot containers.

PROCESSING—Process in water-bath canner 5 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

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COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

GRAPEFRUIT—METHOD I

PREPARATION—Peel; separate into segments, removing all membrane.

PACKING—Pack segments in clean, hot containers. When containers are half filled, add 1 tablespoon sugar. Add $\frac{1}{4}$ teaspoon salt to each quart jar. Fill containers with boiling hot grapefruit juice. If tin cans are used, exhaust 3–5 minutes.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—*Pasteurize* in water-bath canner at 180° F., using the following time periods: Pint jars and No. 2 cans—25 minutes; quart jars and No. 3 cans—30 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

GRAPEFRUIT—METHOD II

PREPARATION—Peel; separate into segments, removing all membrane.

PACKING—Pack segments in clean, hot jars. Fill jars with boiling hot special syrup ($\frac{2}{3}$ cup sugar to 1 cup water). If tin cans are used, exhaust 3–5 minutes.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 12 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.



PHOTOGRAPH BY ROBERT E. COATES

Plate 5. Partial seal: Mason jars—screw lid down as firmly as possible, then unscrew it about $\frac{1}{4}$ inch. For lightning-type covers, snap upper wire in place; leave side clamp up.



PHOTOGRAPH BY ROBERT E. COATES

Plate 6. If the cover of a steam pressure cooker is fastened on with clamps, fasten opposite clamps fairly tight, one pair at a time. Then repeat this process, tightening each pair completely.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

GRAPES

PREPARATION—Wash, stem, sort, seed if desired.

PACKING—Pack grapes in clean, hot containers, pressing down lightly. Fill containers with boiling hot Light, Medium or Heavy Syrup, as preferred. If tin cans are used, exhaust 5 minutes.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 20 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

NECTARINES

PREPARATION—Select fully ripe, firm nectarines. Immerse in boiling water $\frac{1}{2}$ minute; plunge into cold water; slip off skins. Cut in halves; remove pits.

PRECOOKING—Cook in boiling Medium Syrup 3–5 minutes. If desired, 1 cracked nectarine pit may be added for each quart of syrup, then discarded.

PACKING—Pack, boiling hot, in clean, hot containers. Fill containers with boiling hot syrup.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a water-bath canner 15 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

PEACHES—METHOD I

PREPARATION—If possible, plan to can peaches the same day they are picked. Select firm, ripe fruit. Grade as to size and ripeness. Plunge into boiling water; let stand 1 minute. Plunge quickly into cold water. Slip off skins. Halve and remove pits.

PRECOOKING—Simmer peaches in boiling hot Medium Syrup* 4–8 minutes, depending on ripeness.

PACKING—Pack, boiling hot in clean, hot containers, rounded side up, in overlapping layers. Fill containers with boiling hot syrup.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 15–20 minutes, depending on ripeness.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

PEACHES—METHOD II

PREPARATION—Select firm, ripe fruit. Grade as to size. Plunge into boiling water, let stand 1 minute. Plunge quickly into cold water. Slip off skins. Halve and remove pits.

PACKING—Pack raw peaches in clean, hot containers rounded side up in overlapping layers. Fill containers with boiling hot Medium Syrup.* If tin cans are used, exhaust 5 minutes.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 25–35 minutes, depending on ripeness.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

* If the flavor is liked add 1 cracked peach pit to each quart of syrup; boil 5 minutes; strain before filling into jars.

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

PEARS—METHOD I

PREPARATION—After gathering, spread pears, in a single layer on a shelf or floor, in a room where the temperature averages 60°–65° F. and leave them for several days—up to two weeks. Peel. Halve and core, if desired. To prevent discoloration, drop the pears in a vinegar-salt solution made by adding 2 tablespoons each of vinegar and salt to each gallon of water. Drain and rinse before precooking.

PRECOOKING—Cook in boiling Medium Syrup 4–8 minutes, depending on ripeness.

PACKING—Pack, boiling hot into clean, hot containers. Fill containers with boiling hot syrup (Plate 7).

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 15 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

PEARS—METHOD II

PREPARATION—Peel; halve and core if desired. Small pears may be left whole with stems attached, if desired. To prevent discoloration, drop the pears in a vinegar-salt solution made by adding 2 tablespoons each of vinegar and salt to each gallon of water. Drain and rinse before packing.

PACKING—Pack pears in clean, hot containers. To pack halves, place in overlapping layers, cut side down, with the small end of each half toward the center of the container. To pack small whole pears, arrange

the bottom layer with the large ends down, the next layer between the pears in the first layer and so on. To pack whole large pears, turn the stem ends of the second layer down, and so on. If desired, add a small piece of stick cinnamon to each jar before adding syrup. Fill containers with boiling hot Medium Syrup. If tin cans are used, exhaust 5 minutes.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a water-bath canner 25 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

PINEAPPLE—METHOD I

PREPARATION—Select ripe, sound pineapples. Peel; remove eyes; core; slice or dice. Save trimmings to boil with syrup for added flavor. (Strain syrup before using.)

PRECOOKING—Simmer pineapple in Thin Syrup until tender.

PACKING—Pack, boiling hot, into clean, hot containers.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 5 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

PINEAPPLE—METHOD II

PREPARATION—Peel; remove eyes; core; slice or dice. Save trimmings to boil with syrup for added flavor. (Strain syrup before using.)

PACKING—Pack pineapple in clean, hot containers. Fill containers with boiling hot Thin Syrup. If tin cans are used, exhaust 5 minutes.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 30 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

PLUMS—METHOD I

PREPARATION—Select fully ripe plums. Wash. Prick each plum in several places with a fork to prevent shrinkage.

PRECOOKING—Simmer plums in Medium Syrup until barely tender.

PACKING—Pack, boiling hot, into clean, hot containers. Fill containers with boiling hot syrup.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 5 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

PLUMS—METHOD II

PREPARATION—Prick each plum in several places with a fork, to prevent shrinkage.

PACKING—Pack plums in clean, hot containers. Fill containers with boiling hot Medium Syrup. If tin cans are used, exhaust 5 minutes.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 20 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

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COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

PRUNES, FRESH

Follow either Method I or Method II given for Plums.

RHUBARB—METHOD I

(Although rhubarb is actually a vegetable, it is classified as a fruit for canning purposes, because of its acid content.)

PREPARATION—Select young, well-developed stalks. Remove leaves and root ends. Wash thoroughly in several waters. *Do not peel.* Cut in $\frac{1}{2}$ -inch or 1-inch lengths.

PRECOOKING—Simmer rhubarb in Heavy Syrup until tender.

PACKING—Pack, boiling hot, into clean, hot glass jars. Fill jars with boiling syrup.

PARTIAL SEAL—Follow directions for type of jar you are using (Chapter 3).

PROCESSING—Process in water-bath canner 5 minutes.

COMPLETE SEAL—Follow directions for type of jar you are using.

COOLING—Set glass jars upright in a place where no draft will strike them.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

RHUBARB—METHOD II

PREPARATION—Remove leaves and root ends. Wash thoroughly in several waters. *Do not peel.* Cut in $\frac{1}{2}$ -inch or 1-inch lengths.

PRECOOKING—Measure rhubarb; add $\frac{1}{4}$ as much sugar as rhubarb. Bake in a covered dish in a moderate oven (350° F.) 40 minutes. Stir once during baking.

PACKING—Pack hot into clean, hot glass jars. Fill jars with boiling hot syrup. (If there is not enough syrup in pan, use additional boiling hot Heavy Syrup.)

PARTIAL SEAL—Follow directions for type of jar you are using (Chapter 3).

PROCESSING—Process in water-bath canner 5 minutes.

COMPLETE SEAL—Follow directions for type of jar you are using (Chapter 3).

COOLING—Set glass jars upright in a place where no draft will strike them.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

RHUBARB—METHOD III

PREPARATION—Remove leaves and root ends. Wash thoroughly in several waters. *Do not peel.* Cut in $\frac{1}{2}$ -inch or 1-inch lengths.

PACKING—Pack raw rhubarb in clean, hot glass jars, pressing down lightly. Fill jars with boiling hot Thick Syrup.

PARTIAL SEAL—Follow directions for type of jar you are using (Chapter 3).

PROCESSING—Process in water-bath canner 20 minutes.

COMPLETE SEAL—Follow directions for type of jar you are using (Chapter 3).

COOLING—Set glass jars upright in a place where no draft will strike them.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

SAUERKRAUT

(Although sauerkraut is actually a vegetable, it is classified as a fruit for canning purposes, because of its acid content.)

PREPARATION—Sauerkraut, made according to your favorite recipe, must be well-fermented before canning.

PRECOOKING—Heat sauerkraut to the simmering point.

PACKING—Pack hot sauerkraut into clean, hot containers, pressing down firmly. Fill containers with boiling hot sauerkraut juice.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 45 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

STRAWBERRIES—METHOD I

PREPARATION—Gather fully ripe fruit in shallow pans or baskets to avoid crushing. Wash 1 quart at a time in several waters; drain; hull; sort.

PRECOOKING—Add 1 cup sugar to each quart of strawberries. Bring to boiling point slowly. Let stand overnight. In the morning bring quickly to boiling point.

PACKING—Fill strawberries, boiling hot, into clean, hot containers.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 5 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

STRAWBERRIES—METHOD II

PREPARATION—Cook berries in special syrup (4 cups sugar to 1 cup water) 5–8 minutes. Let stand overnight. In the morning reheat to boiling.

PACKING—Fill, boiling hot, into clean, hot containers.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 5 minutes.

COMPLETE SEAL—Follow directions for type of container your are using.

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

STRAWBERRIES, CRUSHED

(for pies, ice-cream, shortcake, sauce, etc.)

PREPARATION—After washing and hulling, crush berries to desired consistency. Measure. Add $\frac{3}{4}$ cup sugar to each pint of crushed berries. Mix well.

PACKING—Fill into clean, hot containers.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 15 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

TOMATOES—METHOD I

PREPARATION—Select ripe, firm tomatoes, free from spots or decay. Cover with boiling water; let stand 1 minute. Plunge quickly into cold water. Drain; peel and core.

PACKING—Pack solidly in clean, hot containers, pressing down to get full pack. Fill containers with boiling hot tomato juice. Add 1 teaspoon salt to each quart container. If tin cans are used, exhaust 5–6 minutes. (Plate 8.)

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 40 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

TOMATOES—METHOD II

PREPARATION—Cover with boiling water; let stand 1 minute. Plunge quickly into cold water. Drain; peel, core, cut in quarters.

PRECOOKING—Heat tomatoes to boiling point, slowly.

PACKING—Pack, boiling hot, into clean, hot containers. Add 1 teaspoon salt to each quart container.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 5 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

TOMATO JUICE

PREPARATION—Select fully ripe, firm tomatoes. Do not use any that are green, decayed or moldy. Wash thoroughly; remove cores. Cut in eighths.

PRECOOKING—Simmer tomatoes until soft; do not boil. Put through a fine sieve. Reheat to boiling.

PACKING—Pour boiling hot tomato juice into clean, hot containers. Do not leave head space. Add $\frac{1}{2}$ to 1 teaspoon salt to each quart container. (Plate 9.)

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 5 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

TOMATO PUREE (for soups, sauces, etc.)

PREPARATION—Wash; remove cores; cut in eighths.

PRECOOKING—Simmer until tender. Put through a fine sieve. Boil down to $\frac{1}{2}$ original volume (Plate 10).

PACKING—Fill, boiling hot, into clean, hot containers. Add $\frac{1}{2}$ –1 teaspoon salt to each quart container.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in water-bath canner 15 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

FRUIT JUICES

GENERAL DIRECTIONS

1. Select firm, fully ripe fruit.
2. Wash; drain and crush.
3. Add $\frac{1}{2}$ cup water to each pound of fruit (except berries—they do not need water).
4. Heat for several minutes but do not simmer or boil (170° – 180° F. is correct if thermometer is used).
5. Extract juice with a fruit press or strain through several layers of cheesecloth. Strain a second time without pressure for clearer juice.
6. Add sugar (unless juice is to be made into jelly), using $\frac{1}{2}$ to 1 cup to each gallon of juice.
7. Heat juice to 160° – 170° F.
8. Fill into hot, sterilized glass jars or bottles to within $\frac{1}{8}$ inch of top.
9. Seal at once.
10. Lay bottles or jars on their sides in a water-bath canner.
11. Pasteurize at 180° F. for 20 minutes.
12. Cool upright, away from drafts.

APPLE JUICE

PREPARATION—Save parings and cores when canning apples. Add several quartered apples and water to cover.

PRECOOKING—Heat to 165° F. and hold this temperature for 10 to 12 minutes. Strain twice. Add sugar (unless juice is to be used for jelly-

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making), using $\frac{1}{2}$ to 1 cup sugar for each quart of juice. Reheat to 160°-170° F.

PACKING—Fill into sterilized glass containers.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Pasteurize at 180° F. for 20 minutes.

COOLING—Set glass containers upright in a place where no draft will strike them.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

BERRY JUICE

PREPARATION—Wash; stem; measure. Add $\frac{1}{4}$ cup water to each quart of berries. Crush berries.

PRECOOKING—Heat to 165° F. and hold this temperature for 10 to 12 minutes. Strain twice. Add sugar (unless juice is to be used for jelly-making), using $\frac{1}{2}$ to 1 cup sugar for each quart of juice. Reheat to 160°-170° F.

PACKING—Fill into sterilized glass containers.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Pasteurize at 180° F. for 20 minutes.

COOLING—Set glass containers upright in a place where no draft will strike them.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

CIDER

Follow general directions for fruit juice. Or, simmer until volume is reduced by half; fill into sterilized containers and seal. Dilute when used as a beverage.

CHERRY JUICE

Remove seeds before crushing. Follow directions for Berry Juice.

GRAPE JUICE (Special Recipe)

PREPARATION—Wash and stem 10 pounds of Concord grapes. Add 2 quarts boiling water.

PRECOOKING—Bring to boil; simmer 1 hour. Bring to boil again; boil 5 minutes. Strain. Add 2 pounds sugar. Bring to boil; boil 2 minutes; skim.

PACKING—Fill into sterilized glass containers.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—None.

COOLING—Set glass containers upright in a place where no draft will strike them.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

FRUIT PUREES

PREPARATION AND PRECOOKING—Any soft fruit may be made into a puree. Wash; drain; crush. Add $\frac{1}{2}$ cup water to each pound of fruit. Simmer several minutes. Put through a fine sieve. Add sugar to taste. Stir over low heat until sugar dissolves. Bring to boil.

PACKING—Fill into clean, hot containers.

PARTIAL SEAL—Follow directions for type of container you are using.

PROCESSING—Process in water-bath canner 20 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.



How to Can Non-Acid Vegetables

NON-ACID" vegetables include practically every vegetable you can think of except tomatoes and rhubarb, which, like fruits, contain natural acids.

Because other vegetables lack acids, they must be canned with special precautions or they will spoil. Sometimes you will find visible evidence of spoilage—bulging cans, bubbles, foaming, etc., or you will discover that the food does not smell just right, or that it looks mushy instead of firm. But more often the danger is invisible and not to be discovered by means of any of our five senses. You see, the dread bacteria known as "botulinus" can get in their deadly work without leaving any apparent trace in the food. And we mean *deadly*, because eating food tainted with botulinus bacteria may be fatal.

These bacteria must be killed during the canning process. But they are a hardy lot, and they resist temperatures way above the boiling point of water (212° F.). Furthermore, intense heat must penetrate to the very center of the jar or can, or some of the bacteria may be left alive—enough to contaminate the entire contents. That is why all authorities agree that *it is not safe to can non-acid foods in a water-bath canner or in the oven*. Unless you own a *steam pressure canner* or can borrow or rent one, do not attempt to can non-acid vegetables. The danger is far too real to take chances.

With a steam pressure cooker it is possible to build up the temperature to 240° F. or 250° F. or even higher, and to maintain this temperature. Even the bacteria that cause botulism cannot hold out against a temperature as high as this.

There are other safety factors, too, which must be observed if we wish to avoid spoilage. Immaculate cleanliness is one. The jars or cans must be in perfect condition. Rubber jar rings must be *new* and clean—in fact, they should be dipped in boiling water before they are placed on the jars. Jars and cans should be *clean* and *hot* when they are filled. There must be no skimping on processing time. If the directions say “10 pounds pressure for 60 minutes,” 58 or 59 minutes is not long enough. It is better to err a minute or two on the long side. In fact, it is important to follow every step in the directions religiously, from the preparation of the food through the cooling period after processing. Attention to all details, no matter how trivial some of them may seem, is absolutely essential to successful canning of non-acid vegetables.

Before you begin to can, read Chapter 3 again to refresh your memory concerning the correct use of the steam pressure cooker, glass jars, tin cans, etc.

ASPARAGUS (whole)

PREPARATION—Select asparagus that is young, tender and fresh. Remove scales and tough ends of stalks. Wash thoroughly in several waters to remove all sand and grit. Sort stalks according to size and tie in uniform bundles.

PRECOOKING—Stand bundles, tips up, in boiling water that reaches halfway up the stalks. Cover tightly and boil 3 minutes. Remove strings.

PACKING—Pack stalks immediately, tips up, in clean, hot containers. Add 1 teaspoon salt to each container. Fill jars with boiling water in which asparagus was cooked.

PARTIAL SEAL—Follow directions for the type of container you are using (Chapter 3).

PROCESSING—Process in a steam pressure cooker at 10 pounds pressure for 35 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

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TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

ASPARAGUS (diced)

PREPARATION—Remove scales and tough ends of stalks. Wash thoroughly. Cut in pieces $\frac{3}{4}$ inch long.

PRECOOKING—Cover with boiling water; bring to a full boil.

PACKING—Pack loosely, while boiling hot, in clean hot containers. Add 1 teaspoon salt to each quart container. Fill containers with boiling water in which asparagus was cooked. Continue as for whole asparagus, above.

BEANS, BAKED

PREPARATION AND PRECOOKING—Follow your favorite recipe for home-baked beans, finishing cooking as if they were to be served at once.

PACKING—Pack beans, while hot, in clean, hot containers. Fill containers with hot juice, adding boiling water if necessary.

PARTIAL SEAL—Follow directions for the type of container you are using (Chapter 3).

PROCESSING—Process in a steam pressure cooker at 10 pounds pressure using the following time periods: Quart jars—50 minutes; pint jars and No. 3 cans—40 minutes; No. 2 cans—35 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

BEANS, HORTICULTURAL OR "SHELL"

PREPARATION—Remove pods.

PRECOOKING—Cover beans with boiling water; boil 5 minutes.

PACKING—Pack hot beans loosely in clean, hot containers. Add 1 teaspoon salt to each quart container. Fill containers with boiling water in which beans were cooked.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).



PHOTOGRAPH BY ROBERT E. COATES

Plate 7. Pears, Method I. Cook pears in syrup as directed. Pack, boiling hot, in clean, hot containers.



PHOTOGRAPH BY ADAMS STUDIOS

Plate 8. Tomatoes, Method I. Pack raw, peeled tomatoes solidly in clean, hot containers. Fill containers with boiling hot tomato juice.

PROCESSING—Process in a steam pressure cooker at 10 pounds pressure for 80 minutes regardless of size of container.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

BEANS, KIDNEY OR PINTO (dried)

PREPARATION—Sort beans, pour into a deep bowl filled with water. Remove any beans that float, as they may be wormy. Drain; cover with fresh, cold water and soak overnight. Drain, saving water.

PRECOOKING—Bring water in which beans were soaked to boiling point. Add beans and boil 4–5 minutes.

PACKING—Pack hot beans loosely in clean, hot containers. Add 1 teaspoon salt to each quart container. Add an inch cube of salt pork to each jar, if desired. Fill jars with boiling water in which beans were cooked.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a steam pressure cooker at 10 pounds pressure, using the following time periods: Quart jars—90 minutes; No. 3 cans—85 minutes; pints—80 minutes; No. 2 cans—70 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

BEANS, LIMA

PREPARATION—Remove pods; sort for size, using 3 bowls (one for tiny, young beans, one for average size and one for more mature beans which are turning yellow. The last-mentioned pack will produce a cloudy liquid, and these beans should be used for purees and soups.) Wash thoroughly, using a sieve or colander. Cover beans with boiling water;

boil 5 minutes. Pack hot beans loosely in clean, hot containers. Add 1 teaspoon salt to each quart container. Fill containers with boiling water in which beans were cooked.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a steam pressure canner at 10 pounds pressure, using the following time periods: Pint jars and No. 3 cans—50 minutes; No. 2 cans—40 minutes; quart jars—55 minutes.

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

BEANS, SOY (green)

Omit soaking, then proceed as for kidney beans.

BEANS, STRING

(green, snap, Kentucky Wonder and wax)

PREPARATION—Wash; remove tips and strings. Cut in 1-inch lengths if desired.

PRECOOKING—Cover beans with boiling water; boil 5 minutes.

PACKING—Pack hot beans into clean, hot containers. Add 1 teaspoon salt to each quart container. Fill containers with boiling water in which beans were cooked.

PARTIAL SEAL—Follow directions for the type of container you are using (Chapter 3).

PROCESSING—Process in steam pressure cooker at 10 pounds pressure, using the following time periods: Quart jars—35 minutes; pint jars or No. 3 cans—30 minutes; No. 2 cans—25 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

BEETS

PREPARATION—Wash thoroughly; cut off tops, leaving roots and 1-inch stems. Plunge into boiling water; leave for a few seconds; then quickly plunge into cold water. Slip off skins; remove roots and stems. If beets are to be packed whole, grade according to size. If not, cut in quarters, or slice.

PACKING—Pack hot beets in clean, hot containers. Add 1 teaspoon salt to each quart container. Fill containers with boiling water.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a steam pressure cooker at 10 pounds pressure, using the following time periods: Quart jars—35 minutes; pint jars—30 minutes; No. 2 or No. 3 cans—30 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

BRUSSELS SPROUTS

PREPARATION—Wash; soak in cold, salted water 2 hours (use 2 teaspoons salt to each quart water); drain.

PRECOOKING—Cover with boiling, salted water. Boil 10 minutes.

PACKING—Pack firmly, boiling hot, in clean, hot containers. Add 1 teaspoon salt to each quart container. Fill containers with boiling water in which sprouts were cooked.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in steam pressure canner at 10 pounds pressure for 40 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

CARROTS

PREPARATION AND PRECOOKING—Select small, young, tender carrots. Remove tops. Scrub. Cover with boiling water; boil 5–10 minutes. Plunge into cold water. Slip off skins and scrape if necessary. Slice or dice, if desired. If packed whole, grade as to size.

PACKING—Pack in clean, hot containers. If packed whole, put first carrots in container with large ends down. Then wedge other carrots, points down, between the carrots in the first layer, etc. Add 1 teaspoon salt to each quart container. Fill containers with boiling water in which carrots were cooked.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a steam pressure canner at 10 pounds pressure, using the following time periods: Pint jars and No. 2 cans—30 minutes; quart jars and No. 3 cans—35 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

CAULIFLOWER

PREPARATION—Separate head into flowerets. Soak in salt water 2 hours (use 2 teaspoons salt to each quart of water). Drain.

PRECOOKING—Cover with boiling salted water; boil 3 minutes.

PACKING—Pack firmly, boiling hot, into clean, hot containers. Add 1 teaspoon salt to each quart container. Fill containers with boiling water in which cauliflower was cooked.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in steam pressure canner at 10 pounds pressure for 40 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

CORN, CREAM-STYLE

PREPARATION—Husk; remove silk. Cut off top third of kernels. With the back of a knife scrape downward, to remove pulp, leaving hulls. Measure. Add 1 teaspoon salt to each quart. Weigh; add half as much boiling water, by weight.

PRECOOKING—Bring to a boil.

PACKING—Fill, boiling hot, into clean, hot containers (C-enamel cans are best; cream-style corn sometimes discolors when canned in glass, because the natural sugar caramelizes during the heavy processing which is necessary). Add 1 teaspoon salt to each quart container.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in steam pressure canner at 15 pounds pressure, using the following time periods: Pint jars—75 minutes; No. 2 cans—70 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

CORN, KERNEL-STYLE

PREPARATION—Husk; remove silk. Cut kernels from cob deeply enough to remove most of the kernels without objectionable hulls. Do not scrape cobs. Measure corn. Add 1 teaspoon of salt to each quart of corn. Weigh corn. Add half as much boiling water as corn, by weight.

PRECOOKING—Heat to boiling point.

PACKING—Pack, boiling hot, into clean, hot containers.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in steam pressure canner at 10 pounds pressure, using the following time periods: Pint jars—60 minutes; quart jars—70 minutes; No. 2 cans—50 minutes; No. 3 cans—65 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

GREENS

(spinach, chard, beet tops, dandelion greens, broccoli, turnip greens, kale, etc.)

PREPARATION—Pick over. Discard hard stems, roots and withered leaves. Wash carefully in several waters, a small quantity at a time. Lift the greens from the water each time instead of pouring off water.

PRECOOKING—Add small amount of boiling water; cook over low heat until thoroughly wilted.

PACKING—Pack, boiling hot, into clean, hot containers, to within $\frac{1}{2}$ inch of top. Cross-cut through greens from top to bottom with knife. Add 1 teaspoon salt to each quart container. Fill containers with boiling water plus liquid from kettle in which greens were cooked.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in steam pressure canner at 15 pounds pressure, using the following time periods: Pint jars—60 minutes; quart jars—65 minutes; No. 2 cans—55 minutes; No. 2½ cans—60 minutes. (Do not use No. 3 cans for greens, as heat penetration is too difficult.)

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

MUSHROOMS

PREPARATION—Wash thoroughly; do not peel except in the case of mature mushrooms with thick skins. Drop into acidulated water (1

tablespoon vinegar to each quart of water). If stems are tough, remove them and cook separately.

PRECOOKING—Place mushrooms in a sieve or colander; cover; immerse for 3–4 minutes in boiling water to which 1 tablespoon of vinegar and 1 teaspoon of salt have been added for each quart of water.

PACKING—Pack mushrooms carefully in clean, hot containers. Add 1 teaspoon salt to each quart container. Fill containers with fresh, boiling water, to which may be added the liquor in which stems were cooked.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a steam pressure canner at 10 pounds pressure, using the following time periods: Pint jars, No. 2 cans or No. 3 cans—25 minutes; quart jars—35 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

OKRA (GUMBO)

PREPARATION—Select young, tender pods. Wash and remove caps.

PRECOOKING—Cover pods with boiling water; bring to a boil and boil 5 minutes.

PACKING—Pack, boiling hot, into clean, hot containers. Add 1 teaspoon salt to each quart container. Fill containers with boiling water in which okra was cooked.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in steam pressure canner at 10 pounds pressure, using the following time periods: Pint jars—35 minutes; quart jars—40 minutes; No. 2 cans—25 minutes; No. 3 cans—30 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

OKRA AND TOMATOES

PREPARATION—Wash okra; remove caps; slice pods crosswise in pieces of desired size. Wash tomatoes; blanch; remove skins and cores; cut in quarters or eighths. Combine vegetables in desired proportions.

PRECOOKING—Bring to boiling point; boil 3–5 minutes.

PACKING—Pack, boiling hot, into clean, hot containers. Add 1 teaspoon salt to each quart container.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in steam pressure canner at 10 pounds pressure, using the following time periods: Pint jars and No. 2 cans—25 minutes; No. 3 cans—30 minutes; quart jars—40 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

PARSNIPS

This vegetable is not usually canned. However, if desired, parsnips may be canned like carrots.

PEAS, GREEN

PREPARATION—Can as soon after gathering as possible, selecting young, tender peas. Shell; sort for size; wash.

PRECOOKING—Add boiling water to cover; simmer, uncovered, 5 minutes.

PACKING—Pack loosely, boiling hot, into clean, hot containers. (Pint jars and No. 2 C-enamel cans are best, because tender peas become overcooked and mushy if packed in larger containers.) If desired, add $\frac{1}{2}$ teaspoon salt to each pint container, but peas retain their color better if no salt is added. Fill containers with boiling water in which peas were cooked (Plate 11).

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in steam pressure canner at 10 pounds pressure,

using the following time periods: Pint jars—45 minutes; No. 2 cans—40 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

PEAS, BLACK-EYED

Follow directions for Lima Beans.

PEPPERS, BELL (GREEN OR RED)

PREPARATION—Wash; remove seed cores.

PRECOOKING—Cover with boiling water; boil 5 minutes.

PACKING—Flatten peppers and pack in hot sterilized containers. Add 1 teaspoon salt to each quart container. Fill containers with boiling water in which peppers were cooked.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a steam pressure canner at 5 pounds pressure for 40 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

PIMIENTOES

PREPARATION AND PRECOOKING—Wash; place in hot oven (450° F.) for about 5 minutes, or until skins blister. Plunge into cold water and peel. Remove seed cores.

PACKING—Pack flat in half-pint or pint jars. Add $\frac{1}{2}$ teaspoon salt to each pint container. Do not add water. If tin cans are used, exhaust 5 minutes.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in steam pressure canner at 5 pounds pressure for 35 minutes, or in water-bath canner 40 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

PUMPKIN—METHOD I

PREPARATION—Wash; cut up; peel; remove seeds and cut in 1- to 1½-inch cubes.

PRECOOKING—Add a small quantity of boiling water and simmer until thoroughly heated, stirring occasionally.

PACKING—Pack, hot, into clean, hot containers. Add 1 teaspoon salt to each quart container. Fill with boiling water in which pumpkin was cooked, adding more if necessary.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in steam pressure canner at 15 pounds pressure, using the following time periods: Pint jars and No. 2 cans—60 minutes; No. 3 cans—70 minutes; quart jars—75 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

PUMPKIN—METHOD II

PREPARATION—Wash; cut up; peel; remove seeds; cut in cubes.

PRECOOKING—Add a small quantity of boiling water; cook until tender; drain. Mash or put through sieve. Reheat to boiling.

PACKING—Pack boiling hot in hot sterilized containers. Add 1 teaspoon salt to each quart container.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in steam pressure canner at 15 pounds pressure, using the following time periods: Pint jars and No. 2 cans—60 minutes; No. 3 cans—70 minutes; quart jars—75 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

SQUASH, WINTER

Follow directions for Pumpkin.

SUCCOTASH

PREPARATION—Combine equal quantities of shelled, tender lima beans or “shell” beans and corn cut from the cob.

PRECOOKING—Cover with boiling water. Bring to a boil; boil 5 minutes.

PACKING—Pack, boiling hot, into clean, hot containers. Add 1 teaspoon salt to each quart container. Fill containers with boiling water in which vegetables were cooked.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in steam pressure cooker at 10 pounds pressure, using the following time periods: Pint jars—60 minutes; quart jars—70 minutes; No. 2 cans—50 minutes; No. 3 cans—65 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

SWEET POTATOES

Since sweet potatoes can be stored in root cellars, can only enough to serve during the season when stored potatoes are not available. If,

during harvesting, more potatoes are cut with the plow than can be used immediately, they may be canned to save them.

PREPARATION AND PRECOOKING—Wash thoroughly; boil or steam until skins slip off easily. Peel quickly, cut in medium-size pieces.

PACKING—Pack hot in clean, hot containers. Add 1 teaspoon salt to each quart container. Fill containers with boiling water.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a steam pressure canner at 10 pounds pressure, using the following time periods: Pint jars and No. 2 cans—95 minutes; quart jars—120 minutes; No. 3 cans 115 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

VEGETABLE MIXTURES (for soups, salads, chowders, etc.)

PREPARATION AND PRECOOKING—Prepare and precook each vegetable as if it were to be canned separately, then combine in desired proportions.

PACKING—Pack, boiling hot, into clean, hot containers. Add 1 teaspoon salt to each quart container. Fill jars with a boiling mixture of the waters in which vegetables were cooked.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a steam pressure canner at 10 pounds pressure, using the following time periods: Pint jars—60 minutes; quart jars—70 minutes; No. 2 cans—50 minutes; No. 3 cans—65 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

6

Meats, Poultry and Fish

WARNING—DANGER!

Never attempt to can flesh products of any kind unless you have a steam pressure canner. Water-bath, steamer and oven methods are unsafe. Temperatures of from 240° to 250° F. are necessary to kill the bacteria that cause food poisoning. To reach these temperatures, steam pressure must be built up to 10 pounds or 15 pounds respectively. Remember that certain types of highly dangerous bacteria do not cause *visible* signs of spoilage.

Flesh products intended for canning must be handled with every sanitary precaution, through each step from slaughtering to processing. *Meat* should be bled thoroughly after slaughtering and then chilled for at least 24 hours to remove all trace of animal heat. *Poultry* also should be bled well, and chilled for at least 6 hours. *Fish* must be canned as soon as possible after it is caught, never longer than 3 or 4 hours later. It should be bled thoroughly and packed in cracked ice, if possible.

EQUIPMENT

When it is necessary to conserve on containers and storage space, flesh products should be canned alone, and not combined with vegetables and other products.

Utensils made of iron or copper should not be used, because they discolor the product. *Never use galvanized ware*—harmful quantities of zinc may be taken up by the product.

Flesh products other than chicken may be canned in glass jars or plain tin cans. Glass jars are best for chicken, because cans may discolor and some of this discoloration may be transferred to the chicken. C-enamel or R-enamel cans must not

be used for chickens because chicken fat reacts on the enamel and causes it to peel off. While this does not harm the product, it makes it unattractive.

As to the size of containers, pint jars and No. 2 or 2½ cans are recommended for canning flesh products. Larger containers require a much longer processing time because of the difficulty of heat penetration and their use is not recommended, although processing time periods are given in the following recipes.

PREPARATION OF MEAT AND POULTRY FOR CANNING

Meat. After thorough bleeding and chilling, prepare just enough meat to be processed at one time. It is preferable to can each cut of meat, such as rib, loin, round, rump or chuck, by itself. Less tender cuts may be canned as hamburger, stew, etc. Trimmings may be made into soup stock and canned. Liver, heart, kidneys, etc., should be canned separately.

Wipe the meat with a damp cloth—do not wash or soak. Trim off excess fat and remove large bones. Cut the meat in uniform pieces, weighing about 1 pound each (Plate 12).

Chicken. After thorough bleeding and chilling, pluck and remove entrails. Remove and discard oil sacs, lungs, eggs, and bits of bloody material. Singe the chicken; wipe inside and out with a damp cloth, or wash *quickly* in cold water. Disjoint.

PRECOOKING MEATS AND POULTRY

The precooking process may be carried on in the oven or in water. The latter is preferable, because the pack is more attractive and the processing time is shorter.

If the *oven* is used, cook the meat at moderate temperature (350° F.) about 30–40 minutes. Test for doneness by cutting one piece. If the red or pink color of the raw meat has almost disappeared at the center, it has cooked long enough. Chicken requires less time—20–30 minutes is long enough.

To precook in water, drop the meat into boiling water,

partly cover the kettle and simmer 12–20 minutes. Test by cutting one piece. If the red or pink color of the raw meat has almost disappeared at the center, it has cooked long enough. Chicken requires only 8–10 minutes cooking.

When a meat product is to be packed in *tin cans*, it may be precooked by either of the above methods and packed hot, or it may be packed raw and exhausted for 40–50 minutes, or until the meat is steaming hot and has lost its raw color.

Frying is not recommended as a precooking method. The finished product is likely to be hard and dry, with an unpleasant flavor.

PACKING MEAT AND POULTRY

After precooking, cut the meat in uniform pieces of serving size. Pack the meat around a small bone in the center of the container. The bone speeds up heat penetration. Pack the meat firmly, pressing it down with a wooden mallet or similar tool.

Add $\frac{1}{2}$ teaspoon of salt to each pint container, $\frac{3}{4}$ teaspoon to each No. 2 can and 1 teaspoon to each quart jar or No. 3 can. If tin cans are used, add the salt before packing, or the lids may rust. Fill the jars with boiling hot meat drippings plus boiling water, or with boiling hot broth, according to the precooking method.

It is extremely important to leave enough head space when flesh products are canned, because the liquid must cover the product or it will discolor and lose its flavor during storage. The following table gives the recommended head space for containers of various sizes:

Glass jars	$\frac{1}{2}$ inch head space
No. 1 tin cans	$\frac{1}{4}$ inch head space
No. 2 tin cans	$\frac{1}{4}$ inch head space
No. 3 tin cans	$\frac{1}{2}$ inch head space

After meat is packed raw in tin cans and exhausted for the required length of time, it should be pressed down firmly. If

the broth produced by exhausting does not completely cover the meat, add boiling water.

FISH

Certain kinds of fish are unsuitable for canning, because of the changes that occur in the composition of the flesh. For example, carp and weakfish become dry and fibrous, and acquire an unpleasant flavor. If you cannot find a certain type of fish listed in the recipes that follow, it is best to assume that it is not a desirable variety for canning purposes.

EQUIPMENT FOR CANNING FISH

Containers larger than pint jars or No. 2 cans should not be used, because of the difficulty of heat penetration.

Containers with wide mouths are best.

Rubber jar rings may be attacked by the oil in the fish, therefore jar lids equipped with composition self-sealing gaskets are preferable.

PREPARATION OF FISH FOR CANNING

Bleed as soon as caught as follows: Cut through throat and base of gills just below head. Pack in crushed ice until ready to can.

Clean the fish thoroughly. Cut off heads, tails and fins. Remove skin, or scale as follows: Dip the fish in boiling water and remove scales by scraping with a knife. Wash in fresh water. Be sure to remove all bits of entrails, dark membrane or bloody material.

Leave small fish whole. Cut large fish in serving size pieces, removing backbone and other large bones if desired. Soak for 1 hour in brine made by adding $\frac{1}{2}$ pound of coarse cooking salt to each gallon of cold water. Drain thoroughly.

PACKING FISH

Pack solidly in hot, sterilized pint jars or No. 2 cans to within $\frac{1}{2}$ inch of top. Do not add salt or liquid.



PHOTOGRAPH BY ROBERT E. COATES

Plate 9. Pour boiling hot tomato juice into clean, hot containers.
Do not leave head space.



PHOTOGRAPH BY ROBERT E. COVIER

Plate 10 To make tomato puree, simmer tomatoes until tender; put through a fine sieve. A "food mill" like this is a convenience.

PROCESSING

Use only a steam pressure canner for processing fish. No other method is safe. Follow instructions in recipes for required pressure and time periods.

RECIPES FOR CANNING MEAT, POULTRY
AND FISH

BEEF

(chuck, loin, rib, round, rump)

PREPARATION—Wipe with damp cloth. Remove bone, gristle and excess fat. Cut in pieces weighing about 1 pound.

PRECOOKING—Cook in a moderate oven (350° F.) for 30–40 minutes or drop into boiling water and simmer 12–20 minutes. Test for doneness by cutting one piece. If raw color has almost disappeared the meat is sufficiently cooked.

PACKING—Cut meat into uniform pieces of serving size. Pack at once into clean, hot containers, around a small bone in the center of each container. Pack firmly, pressing down. Add salt ($\frac{1}{2}$ teaspoon to each glass jar; $\frac{3}{4}$ teaspoon to each No. 2 can). Fill the containers with boiling hot meat drippings plus boiling water, or with boiling hot broth, according to precooking method, leaving sufficient head space. If meat is packed raw in tin cans, exhaust 40–50 minutes.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a steam pressure canner at 15 pounds pressure, using the following time periods: Pint jars and No. 2 cans—85 minutes; No. 2½ cans—110 minutes; quart jars and No. 3 cans—120 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

BEEF, CORNED

PREPARATION AND PRECOOKING—Wash the corned beef. Cut in pieces weighing about 1 pound each. Cover with cold water, bring to a boil; drain. Cover with cold water, bring to a boil; lower heat and simmer until thoroughly heated. Cut meat in uniform pieces of serving size.

PACKING—Pack at once into clean, hot containers. Add bay leaf, peppercorns, and whole cloves if desired. Fill containers with boiling hot broth, leaving sufficient head space.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a steam pressure canner at 15 pounds pressure, using the following time periods: Pint jars and No. 2 cans—85 minutes; No. 2½ cans—110 minutes; quart jars and No. 3 cans—120 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

HEART

PREPARATION—Wash; remove thick connective tissue and cut in pieces suitable for packing.

PRECOOKING—Drop into boiling water; simmer 15–20 minutes.

PACKING—Pack hot, into clean, hot containers. Add ½ teaspoon salt to each pint container. Fill containers with boiling hot broth in which heart was cooked.

PARTIAL SEAL—Follow directions for type of container you are using.

PROCESSING—Process in a steam pressure canner at 15 pounds pressure, using the following time periods: Pint jars and No. 2 cans—85 minutes; No. 2½ cans—110 minutes; quart jars and No. 3 cans—120 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

TONGUE

PREPARATION AND PRECOOKING—Scrub tongue. Drop into boiling water and simmer 1 hour. Remove roots and skin. Cut in pieces suitable for packing. Reheat to simmering in broth.

PACKING—Pack hot into clean, hot containers. Add $\frac{1}{2}$ teaspoon salt to each pint container. Fill containers with boiling hot broth in which tongue was cooked.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a steam pressure canner at 15 pounds pressure, using the following time periods: Pint jars and No. 2 cans—85 minutes; No. 2½ cans—110 minutes; quart jars and No. 3 cans—120 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

BEEF, GROUND (HAMBURGER)

PREPARATION—Put beef through meat grinder, using plate with $\frac{1}{8}$ inch holes. Add 3 tablespoons salt to each 5 pounds of ground beef; mix well.

PACKING—Pack, cold, tightly into tin cans and exhaust 40–50 minutes. Or form meat into cakes, precook in a moderate oven (350° F.) until raw color disappears, then pack hot in clean, hot glass jars and fill jars with boiling hot broth.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in steam pressure canner at 15 pounds pressure, using the following time periods: Pint jars or No. 2 cans—90 minutes; No. 2½ cans—115 minutes; quart jars—120 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

BEEF, HASH

PREPARATION AND PRECOOKING—Chop meat into small pieces. Add water to cover; bring to simmering point and cook several minutes.

PACKING—Pack hot into clean, hot containers. Add $\frac{1}{2}$ teaspoon salt to each pint container. Fill containers with boiling hot broth in which meat was cooked.

PARTIAL SEAL—Follow directions for type of container you are using.

PROCESSING—Process in steam pressure canner at 15 pounds pressure, using the following time periods: Pint jars and No. 2 cans—90 minutes; No. 2½ cans—115 minutes; quart jars—120 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

BEEF, STEW

PREPARATION—Cut meat in 1-inch cubes.

PRECOOKING—Cover with boiling water or broth and simmer 8–10 minutes or until meat shrinks and is heated through. (The raw color should disappear almost completely at the center.)

PACKING—Pack, hot, into clean, hot containers. Add $\frac{1}{2}$ teaspoon salt to each pint container. Fill containers with boiling hot broth.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a steam pressure canner at 15 pounds pressure, using the following time periods: Pint jars and No. 2 cans—85 minutes; No. 2½ cans—110 minutes; quart jars and No. 3 cans—120 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

BEEF STEW WITH VEGETABLES

PREPARATION—Cut meat in 1-inch cubes. Dredge with seasoned flour. Prepare a mixture of tomato pulp, diced carrots, diced potatoes and diced turnips.

PRECOOKING—Brown meat with a small amount of chopped onion in hot beef fat. Remove from heat. Cover vegetables with hot water; bring to a boil. Add meat mixture. Season with salt and pepper.

PACKING—Pack hot in clean, hot containers.

PROCESSING—Process in a steam pressure canner at 15 pounds pressure, using the following time periods: Pint jars and No. 2 cans—85 minutes; No. 2½ cans—110 minutes; quart jars and No. 3 cans—120 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

LAMB AND MUTTON

Follow directions for Beef as given in this chapter. Small pieces may be canned as stew meat.

PORK, FRESH

Hams and shoulders are usually cured, rather than canned. Sides are either salted or made into bacon. Loin of pork and meat from spareribs may be canned, following the directions for Beef as given in this chapter. Be sure to remove excess fat before precooking.

PORK, HEADCHEESE

The head, heart and tongue are used to make headcheese.

PREPARATION AND PRECOOKING—Wash head; split; soak in cold water overnight. Remove brains, eyes, ears, mucous membranes and nostrils.

Clean remaining parts. Clean heart; remove connective tissues, cut into pieces. Scrub tongue; parboil; remove roots and skin; cut into pieces. Combine head, heart and tongue; cover with cold water, bring to a boil and simmer until flesh comes off bones; drain; remove bones. Mince meat finely. Weigh. To each 25 pounds add 4 quarts broth; $\frac{1}{2}$ pound salt, 2 ounces black pepper, 1 ounce ground cloves, $\frac{1}{2}$ ounce each cayenne and caraway seeds, and $\frac{1}{2}$ ounce allspice. If necessary, add more broth to cover meat. Simmer $\frac{1}{2}$ hour.

PACKING—Pack hot into clean, hot containers, preferably tin cans.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a steam pressure canner at 15 pounds pressure, using the following time periods: Pint jars and No. 2 cans—90 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

RABBIT, DOMESTIC

Follow directions for canning Chicken as given farther along in this chapter.

VEAL

Follow directions for Beef as given in this chapter.

WILD GAME

(venison, reindeer, rabbit, wild fowl, etc.)

Clean and cut up; soak in brine made by adding 1 tablespoon salt to each quart of water for 30 minutes; drain. Precook and process venison, reindeer, etc., like beef. Precook and process wild rabbit and fowl like chicken.

CHICKEN

PREPARATION—Two-year-old hens are best for canning. After plucking, cleaning, etc., as described earlier in this chapter, sort into 3 piles:

1. Meaty pieces—breasts, thighs, legs, upper wing joints.

2. Bony pieces—backs, wings, necks.

3. Giblets. (Can livers alone, gizzards and hearts together. Never put giblets in with other chicken meat as they flavor and discolor it.)

Remove skin if desired and trim off lumps of fat, as too much fat makes processing difficult.

Make broth with the bony pieces, as follows: Cover pieces with cold, lightly salted water; simmer until meat is tender; strain. Use broth in canning meaty pieces. Strip meat from bones and can for use in salads or sandwich fillings.

PRECOOKING—Precook meaty pieces in a moderate oven (350° F.) for 20–30 minutes or simmer in water for 8–10 minutes. The bones may be removed from the meaty pieces if desired, although they improve the flavor of the canned product. Precook the giblets in water.

PACKING—Pack hot in clean, hot containers. Add $\frac{1}{2}$ teaspoon salt to each pint container. Fill containers with boiling hot water. If chicken is packed raw in tin cans, exhaust for 40 minutes, or until steaming hot.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a steam pressure canner at 15 pounds pressure, using the following time periods:

Chicken with bones

No. 2 cans	55 minutes
Pint jars and No. 2½ cans	65 minutes
No. 3 cans	70 minutes
Quart jars	75 minutes

Chicken, boned

Pint jars and No. 2 cans	85 minutes
No. 2½ cans	110 minutes
Quart jars and No. 3 cans	120 minutes

Giblets

Pint jars and No. 2 cans	85 minutes
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COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

BROTH (made from meat or chicken)

PREPARATION AND PRECOOKING—Cover bones and trimmings with cold water; bring to a boil. Simmer 3–4 hours, adding more water from time to time if necessary. Strain; chill; skim off fat. Reheat; season to taste; bring to a boil. Cooked rice or barley may be added if desired. Bits of meat removed from the bones may be added, also.

PACKING—Fill, boiling hot, into clean, hot containers.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a steam pressure canner at 15 pounds pressure, using the following time periods:

Clear

Pint jars and No. 2 cans	25 minutes
Quart jars, No. 2½ and No. 3 cans	30 minutes

With Rice or Barley

Pint jars and No. 2 cans	35 minutes
Quart jars, No. 2½ and No. 3 cans	40 minutes

With Bits of Meat

Pint jars and No. 2 cans	40 minutes
Quart jars, No. 2½ and No. 3 cans	45 minutes

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

RECIPES FOR CANNING FISH *

SALMON AND SHAD

PREPARATION—Bleed; scale, wash; remove and discard entrails, head, tail and fins. Wash thoroughly. Cut in pieces to fit containers. Soak in brine (½ pound salt to each gallon of water) for 1 hour. Drain thoroughly.

* Adapted from the United States Bureau of Fisheries Investigational Report No. 34.

PACKING—Pack solidly in clean, hot containers; do not crush. Do not add water or salt. If fish is packed in tin cans, crimp covers, using only first operation roll of double seamer, exhaust 15 minutes, then seal.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in a steam pressure canner at 10 pounds pressure, using the following time periods: Pint jars—110 minutes; No. 2 cans—100 minutes.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

MACKEREL, LAKE TROUT, WHITEFISH, MULLET

PREPARATION—Bleed; scale; wash; remove and discard entrails, head, tail and fins. Wash thoroughly; cut off strips of thin belly $\frac{1}{2}$ inch to $\frac{3}{4}$ inch wide. Split, leaving backbone intact. Cut in pieces to fit containers. Soak in brine ($\frac{1}{2}$ pound salt to each gallon of water) for 1 hour. Drain thoroughly.

PACKING—Pack solidly in clean, hot containers, alternating head ends and tail ends. If glass jars are used, place skin side next to glass.

PRECOOKING AND EXHAUSTING—Submerge open glass jars in kettle of brine (4 ounces of salt to 1 gallon of water). Bring to a boil and boil 15 minutes. If tin cans are used, crimp covers, using only first operation roll of double seamer. Exhaust for 15 minutes. Invert cans and jars on wire screen to drain about 3 minutes. Discard drained liquid. Seal tin cans.

PARTIAL SEAL—Follow directions for type of container you are using (Chapter 3).

PROCESSING—Process in steam pressure canner at 10 pounds pressure, using the following time periods: Pint jars—100 minutes; No. 2 tin cans—90 minutes. After processing glass jars, release pressure very slowly (20 minutes or longer). For tin cans, release pressure at once by opening petcock gradually.

COMPLETE SEAL—Follow directions for type of container you are using (Chapter 3).

COOLING—Set glass containers upright in a place where no draft will strike them. Cool tin cans under running cold water.

LABELING—Include name of product, lot number and date of canning.

TEST FOR LEAKAGE—Chapter 3.

STORAGE—Store in a cool, dry place.

How to Dehydrate Foods

CENTURIES and centuries ago, primitive man, guided by the powerful instinct of self-preservation, discovered that nuts and grains could be dried and stored against the winter months. Today we have no need to dehydrate these particular foods, and so we concentrate on drying fruits and vegetables.

In the early years of American history, Spanish missionaries reached California and planted the first peaches, apricots, figs and raisins. They brought with them, from Spain, tried and true formulas for drying these fruits, and thus began a new industry in a new world. However, American Indians, living on the western plains where the air was dry and warm, had discovered the art of drying strips of buffalo meat in the sun.

On the other side of the world, tribes of nomads whose caravans were constantly on the move found that dates kept better and weighed less when they were dried.

Dehydration is, therefore, the oldest known method of food preservation. Today, other methods of food preservation are used for many foods, and dehydration is applied mainly to fruits and vegetables.

Dried fruits, because of their high natural sugar content, are valuable as a source of quick energy. They are rich in minerals, supplying calcium, phosphorus, iron and copper. Peaches, prunes, and apricots are good sources of vitamin A, in the form of carotene. It has been found that fruits which are subjected to sulfuring before drying retain more of their original vitamin C content than those which are precooked in steam or water.

Fruits are easier to dry than vegetables, but while home methods of dehydration are not difficult, anyone who intends to dry either fruits or vegetables must be prepared to spend

time and patience freely, because dehydration demands almost constant attention, particularly at the start and finish of the process. Space is a requirement, also, because drying equipment takes up room, and city dwellers and suburbanites should should not attempt to preserve food by this method.

Fruits and vegetables to be dried must be ripe, fresh, clean and free from any signs of decay or mold. They must be handled with great care to prevent bruising.

PREPARATION OF FRUITS AND VEGETABLES FOR DRYING

Foods to be dried, with certain exceptions, are cut into thin, even slices or pieces of uniform size. Fruits are subject to discoloration and must be treated against it. Any one of several methods may be used. The food may be dropped into a salt solution, precooked in steam or water or sulfured.

Salt solution. Use 4 teaspoons of salt to each gallon of water.

Salt and vinegar solution. Use 2 tablespoons each of salt and vinegar to each gallon of water.

Precooking. Vegetables precooked in steam keep better, retain more of their food value and require less soaking than those precooked in water. They also are better in flavor and appearance. Fruits that are not sulfured should be steamed before drying. Equipment and methods are discussed farther along in this chapter. When vegetables are precooked in water, cook small amounts at a time and cook only until just tender. To conserve food value, use the same water for several batches.

The length of time for steaming varies with the food. Overcooking is less dangerous than undercooking. Be sure the food is heated through and almost done before removing.

Sulfuring requires special equipment and must be carried on out of doors. The sulfuring chamber is a wooden box or covered frame, big enough to cover a stack of trays and the sulfur pan. There must be a small space at the bottom for air to enter so that the sulfur will burn. The lowest tray

should be 6–8 inches above the ground, resting on a sturdy support, such as wooden blocks. The trays are stacked with pieces of light lath between them.

Measure the sulfur carefully, using 1 level teaspoon for each pound of prepared fruit. Wrap the sulfur in a piece of paper and place in a shallow tin can. Set the can on the ground, in front of the trays. Ignite the paper and set the sulfuring chamber over the trays and can.

The correct sulfuring time is given in the recipes in this chapter.

STEAMING EQUIPMENT

Steam pressure canner. Pour a small amount of water into the canner and bring to a rapid boil. Spread a thin layer of prepared food in a colander or wire basket and set on a rack above the boiling water. Cover the cooker, but leave the petcock open. Keep the water boiling rapidly throughout the required length of time for steaming, as given in the recipe.

Steamers. Spread a thin layer of prepared food in the top compartment and steam over rapidly boiling water in the lower compartment.

Kettles. Any large kettle, or a wash boiler, may be used for steaming if it is fitted with a rack and a wire basket for the prepared food.

DRYING METHODS

The air in which food is dried must be warm, dry and moving.

Sun-drying can be carried out successfully in localities where the air is clear and dry, with practically rainless periods. Sweet corn can be dried successfully by this method, although, like other vegetables, it has a better flavor when dried with controlled heat. Fruits, especially apples, apricots, berries, cherries, peaches and plums, can be sun-dried with excellent results.

Wire trays, slat trays covered with cheesecloth or netting,

or window screens, are best for holding the fruit, because air circulates under the food. The trays may be placed on an outdoor shelf, a roof, or in racks in sunny windows. At night, or when showers approach, the trays must be taken indoors. During the day the food must be stirred two or three times.

The food must be protected from insects at all times with screening, mosquito netting or cheesecloth.

Controlled heat, maintained in heated driers, is best for vegetables and has several advantages over sun-drying for any type of food. In the first place, it can go on no matter what the weather, season or time of day. Drying time is shorter, and vegetables in particular retain more food value, color and flavor.

Special equipment is necessary for this method, and may be purchased or made at home.* Three types of driers are commonly used, the swinging or "bird-cage" drier, which may be hung over the kitchen range, the cabinet drier, and the tunnel drier.

TEMPERATURES FOR DRYING

For best results, drying temperatures range between 125° and 160° F. Temperatures are usually raised during the middle stages and lowered at the end to prevent scorching or caramelization. Foods may sour if temperatures are too low at the start. On the other hand, if temperatures are too high at the beginning, the cells may burst or the surface of the food may harden to such an extent that the inside of the food cannot dry out.

It is best to use a thermometer, but if none is available, test by "feel." If the food is moist to the touch and cooler than the surrounding air, drying is progressing satisfactorily. If the food is dry and as warm as the air, the temperature is too high.

* The following government publications give full directions for constructing homemade swinging and cabinet driers: Farmers' Bulletin No. 934, "Farm and Home Drying of Fruits and Vegetables," five cents; Farmers' Bulletin No. 1918, "Drying Foods for Victory," ten cents. Both may be purchased from the Superintendent of Documents, Washington, D. C.

When fruits reach the finished stage, they are leathery and tough. Vegetables are rigid and brittle. If there is any doubt, reduce the temperature and leave the food in the drier a little longer.

STORAGE

Once dried, foods must be protected against moisture, dust and insects.

First of all, sort the food carefully and remove any pieces that show signs of moisture for further drying. As a special precaution against insects, return all food to the drier and reheat to 165°-180° F. for 10-15 minutes before packing.

If dehydrated food is packed in moisture-proof containers and stored in a cool, dark, dry place, it will keep for a year. However, it should be examined at intervals for signs of moisture. If such signs are present the food should be reheated to 165° F. in the drier, and resealed.

CONTAINERS

Glass jars, tin cans, tightly covered tin boxes and stone crocks with covers that can be sealed are all excellent containers for dried foods.

If large containers are used, pack the food in small bags that hold just enough for one meal, and pack the labeled bags in the large container. The container, of course, must be resealed each time it is opened.

Glass jars which are chipped at the top and not fit for canning, may be used if they are sealed with cloth dipped in hot paraffin. Glass jars equipped with screw tops may be sealed with two used rubber rings, if the rings are not brittle. Screw the tops down tightly.

COOKING

Before dried foods can be cooked, they must be soaked. Cover fruits with cold water and soak for $\frac{1}{2}$ to 6 hours. Greens do not require soaking. Other vegetables should be soaked just long enough to restore them to plumpness.

RECIPES FOR DRYING FRUITS

APPLES

PREPARATION—Select ripe, firm apples of good eating or cooking quality. Wash; pare; core; remove blemishes; cut in slices or rings $\frac{1}{4}$ -inch thick or in eighths.

PRECOOKING OR SULFURING—Use any one of the following methods:

1. Drop into salt solution (4 teaspoons salt to each gallon of water); hold for 10 minutes.

2. Steam 5–7 minutes.

3. Sulfur 20–30 minutes.

DRYING—Start at 130° F. Gradually increase to 165° F. Finish at 145–150° F.

APRICOTS

PREPARATION—Select tree-ripened fruit if possible. Do not peel. Cut in halves; remove stones.

PRECOOKING OR SULFURING—Use either of the following methods:

1. Steam 5–7 minutes.

2. Sulfur $1\frac{1}{2}$ –2 hours.

DRYING—Spread, cut side up, in single layers. Start drying at 130°–145° F. gradually increase to 155° F. Finish at 145° F.

BERRIES

(blackberries, dewberries, loganberries, black raspberries, red raspberries)

PREPARATION—Select ripe, firm berries. Cover trays with cloth to keep berries from sticking. Spread berries in thin layers, not more than two berries deep for softer fruit. For sun-drying spread one layer deep.

DRYING—Start at 135°–145° F. (130° F. for dewberries, loganberries and red raspberries). Gradually increase to 150°–155° F. when about three-fourths dry. Decrease temperature toward end. To test for dryness, crush a berry between fingers. If no moisture shows, drying is complete.

CHERRIES

PREPARATION—Select cherries that are just ripe. Wash, stem, pit and discard any imperfect fruit. Drain 1 hour. Spread on trays in single layers.



COURTESY OF BALL BROTHERS COMPANY

Plate 11. Pack boiling hot green peas loosely in clean, hot containers.



COURTESY OF BALL BROTHERS COMPANY

Plate 12. It is preferable to can each cut of meat, such as rib, round etc., by itself.

DRYING—Start at 120° F. Gradually increase heat but never let temperature go above 150° F. Reduce heat when almost dry.

FIGS

PREPARATION—Select well-ripened, firm figs. Remove stems. Hold for 1 minute in steam or boiling water. Cut in halves lengthwise. Spread on trays in single layers.

DRYING—Start at 115°–120° F. After fruit shrivels noticeably, increase temperature to 140°–145° F. Stir at intervals. Reduce heat when almost dry.

NECTARINES

Follow directions for Apricots.

PEACHES

PREPARATION—Select peaches ripe enough for eating, but not dead ripe. Wash. Hold in boiling water 1–2 minutes; plunge into cold water; remove skins. Cut in halves, remove pits. If very large, quarter or slice. Unless steamed or sulfured at once, hold in salt solution (4 teaspoons salt to each gallon of water).

PRECOOKING AND SULFURING—Use either of the following methods:

1. Steam 5–7 minutes.
2. Sulfur 3–4 hours.

DRYING—Place on trays in single layer, cut side up. Start drying at 125°–130° F. Increase gradually to 175° F. Toward end, lower to 150° F.

PEARS

PREPARATION—Wash; pare; core; remove blemishes. Cut in $\frac{1}{4}$ -inch slices, quarters or eighths. Unless steamed or sulfured at once, hold in salt solution (4 teaspoons salt to each gallon of water).

PRECOOKING OR SULFURING—Use either of following methods:

1. Steam 5–7 minutes.
2. Sulfur 3–4 hours.

DRYING—Place on trays in single layer. Start at 130° F. Gradually increase to 150° F. Toward end, decrease temperature.

PLUMS

PREPARATION—Wash; halve; stone.

PRECOOKING OR SULFURING—Use either of the following methods:

1. Steam 3–5 minutes.
2. Sulfur 20–25 minutes.

DRYING—Place on trays in single layers cut side up. Start at 130° F. Gradually increase to 165° F. Toward end, reduce temperature.

PRUNES

PREPARATION—If dried whole without removing pits, hold in steam or boiling water 2 minutes to soften skins. Or halve and remove pits. Proceed as for Plums.

RECIPES FOR DRYING VEGETABLES

BEANS, LIMA OR “SHELL”

PREPARATION—Select beans just ready for table use. Shell. Pick over carefully.

PRECOOKING—Use either of the following methods:

1. Steam 8 minutes.
2. Hold in boiling water 5 minutes.

Drain.

DRYING—Spread on trays in layers $\frac{1}{2}$ – $\frac{3}{4}$ inch deep. Start at 115°–120° F. Gradually increase temperature to 140° F. Stir frequently at beginning. Toward end, lower temperature.

BEANS, SNAP

PREPARATION—Wash; cut off ends; remove strings. Leave whole or cut in halves or thirds.

PRECOOKING—Use either of the following methods:

1. Steam 15 minutes.
2. Hold in boiling water until almost tender.

Drain.

DRYING—Line trays with thin cloth. Spread beans in thin layer. Do not let temperature rise above 155° F. during drying.

CORN

PREPARATION—Husk; remove silks and any blemishes.

PRECOOKING—Use either of following methods:

1. Steam 10 minutes.
2. Hold in boiling water 8–10 minutes.

Drain; cool; cut from cob.

DRYING—Spread on trays in layers $\frac{1}{2}$ – $\frac{3}{4}$ inch deep. Start at 130° F. Gradually increase to 140° F. Toward end, reduce temperature. Stir during drying.

HERBS

PREPARATION—Gather when mature but before flowers develop. Be sure leaves are free from sand, etc. Tie in small bundles.

DRYING—Hang bunches in a dry room that has good circulation of air. When thoroughly dry, remove coarse stems. Store in labeled glass jars with screw tops in a cool, dry place.

LEAFY GREEN VEGETABLES

(beet tops, dandelion greens, kale, mustard greens, turnip greens, etc.)

PREPARATION—Wash in several waters. Trim off tough stems.

PRECOOKING—Steam 5 minutes.

DRYING—Line trays with cloth. Spread greens on trays in a layer not more than 1 inch deep. Do not let temperature rise above 150° F. during drying.

OKRA

PREPARATION—Select tender young pods. Cut in $\frac{1}{2}$ -inch slices.

PRECOOKING—Steam 4–8 minutes.

DRYING—Spread on trays in thin layers. Start at 125° F. Gradually increase temperature to 140° F. Toward end, decrease temperature.

PEAS

PREPARATION—Shell; discard imperfect peas.

PRECOOKING—Use either of the following methods:

1. Steam 8–10 minutes.
2. Hold in boiling water 3–4 minutes.

DRYING—Spread on trays in layers $\frac{1}{2}$ – $\frac{3}{4}$ inch deep. Start at 115°–120° F. Gradually increase temperature to 140° F. Stir frequently at beginning. Toward end, lower temperature.

PUMPKIN OR SQUASH

PREPARATION—Cut in strips 1–2 inches wide. Peel; remove seeds and pithy material; cut in slices $\frac{1}{2}$ -inch thick.

PRECOOKING—Use either of the following methods:

1. Steam 5–8 minutes.
2. Hold in boiling water 5–8 minutes.

DRYING—Spread on trays in single layer. Start at 175° F. Finish at 160° F.

Preparing Fruits and Vegetables for Sharp-Freezing

MANY farming communities now boast *sharp-freezing* plants and freezing lockers where individuals may have home-grown produce frozen and stored.

Sharp-freezing means extra-quick freezing which does not break the cell walls in food. Fruits and vegetables frozen in this way retain the appearance, flavor and texture of fresh foods. Vitamins are not destroyed during the freezing process to any appreciable extent.

WHAT FOODS TO FREEZE?

Ripe, full-flavored fruits, such as berries, cherries, peaches, apricots, plums, grapes, rhubarb and even apples, may be frozen successfully. Asparagus, snap beans, lima beans, broccoli, brussels sprouts, carrots, cauliflower, corn, peas and spinach or other greens, are among the vegetables that take kindly to sharp freezing.

PREPARATION OF FRUITS FOR SHARP-FREEZING

Select perfect fruit, free from blemishes, at the peak of ripeness. Prepare immediately, as for table service. Large fruits may be diced or sliced.

PACKING FRUITS

Fruits may be packed dry, with sugar, or in syrup, according to type. Suitable containers include heavy waxed paper cups, pasteboard cartons lined with cellophane or waxed paper, and glass jars. If glass jars are used, it is important to leave enough head space to allow for expansion during freezing—

1 inch for pint jars or smaller sizes, 1½ inches for quart jars. All containers must be tightly covered.

Fruits which are to be used for pie-making or for jellies and preserves, may be packed dry.

For dessert service, juicy fruits and berries may be packed with sugar. Add the sugar before packing, using 2 cups for every 2-3 quarts of prepared fruit.

Certain fruits such as peaches, which discolor quickly, should be packed with cold Medium Syrup (Chapter 4).

PREPARATION OF VEGETABLES FOR SHARP-FREEZING

It is necessary to steam or scald vegetables before packing, in order to destroy the enzymes that would change sugar to starch and kill vitamins during storage. This process is called *blanching* and is very brief, so that the vegetables will not taste cooked.

Vegetables are prepared just as they are for ordinary cooking. Time periods for blanching must be followed exactly.

PACKING VEGETABLES

Vegetables are packed like fruits, in the same types of containers, either dry or in a 2% brine, *made by dissolving ½ cup salt in 6 cups water*. With the two exceptions of greens and sweet corn, most vegetables retain color and flavor better if packed in this mild brine.

MEATS

The procedure for preparing meat for sharp-freezing is not always the same. Officials at local sharp-freezing plants should be consulted as to the way they prefer meat prepared.

SPEED!

Speed is essential all the way, throughout preparation and packing. The moment the food is packed it should be rushed to the freezing plant.

RECIPES FOR SHARP-FROZEN FRUITS

APPLES

PREPARATION—Peel; core; quarter or slice. Drop immediately into cold Medium Syrup (Chapter 4) to prevent discoloration.

PACKING—Pack, in syrup in liquid-proof containers. Rush to freezer.

APRICOTS

PREPARATION—Blanch; slip off skins; halve; remove stones. Weigh. Add 2 cups sugar to each 3–4 pounds prepared fruit. Stir until sugar dissolves.

PACKING—Pack at once in liquid-proof containers. Rush to freezer.

BERRIES

PREPARATION—Wash; stem; pick over carefully.

PACKING—Pack dry or in sugar (2 cups sugar to each 3–4 pounds berries) in liquid-proof containers. Rush to freezer.

CHERRIES

PREPARATION—Wash; stem; pit; pick over carefully.

PACKING—Pack dry or in sugar (2 cups sugar to each 3–4 pounds cherries), or in cold Medium Syrup (Chapter 4), in liquid-proof containers. Rush to freezer.

GRAPES

PREPARATION—Wash; stem; pick over carefully.

PACKING—Pack dry or in sugar (2 cups sugar to each 3–4 pounds grapes) in liquid-proof containers. Rush to freezer.

NECTARINES

Follow directions for Peaches, below.

PEACHES

PREPARATION—Blanch; slip off skins; halve; remove stones. Slice if desired. Drop at once into cold Medium Syrup (Chapter 4) to prevent discoloration.

PACKING—Pack, in syrup, in liquid-proof containers. Rush to freezer.

RHUBARB

PREPARATION—Wash; do not peel. Cut in uniform pieces.

PACKING—Pack, dry, in liquid-proof containers. Rush to freezer.

RECIPES FOR SHARP-FROZEN VEGETABLES

ASPARAGUS

PREPARATION—Wash thoroughly in several waters. Remove scales. Cut off tough ends of stalks. If desired, cut in 1-inch pieces.

BLANCHING—Blanch 2-3 minutes by steaming or immersing in boiling water. Drain. Plunge at once into ice water or place under cold running water. Remove from water as soon as thoroughly cold. Drain well.

PACKING—Pack in liquid-proof containers, in 2% brine. Rush to freezer.

BEANS, SNAP OR STRING

PREPARATION—Wash; remove tips and strings. Cut in 1-inch lengths if desired.

BLANCHING—Blanch 2-3 minutes by steaming or immersing in boiling water. Drain. Plunge at once into ice water or place under cold running water. Remove from water as soon as thoroughly cold. Drain well.

PACKING—Pack in 2% brine in liquid-proof containers. Rush to freezer.

BEANS, GREEN LIMA

PREPARATION—Shell. Blanch $\frac{3}{4}$ to $1\frac{1}{4}$ minutes by steaming or immersing in boiling water. Drain. Plunge at once into ice water or place under cold running water. Remove from water as soon as thoroughly cold. Drain well.

PACKING—Pack in 2% brine in liquid-proof containers. Rush to freezer.

BROCCOLI

PREPARATION—Wash thoroughly. Remove tough, woody portions of stems. Cut in uniform lengths.

BLANCHING—Blanch 3-4 minutes by steaming or immersing in boiling water. Drain. Plunge at once into ice water or place under cold running water. Remove from water as soon as thoroughly cold. Drain well.

PACKING—Pack, dry, in liquid-proof containers. Rush to freezer.

BRUSSELS SPROUTS

PREPARATION—Soak 1 hour in salt water. Drain.

BLANCHING—Blanch 3–4 minutes by steaming or immersing in boiling water. Drain. Plunge at once into ice water or place under cold running water. Remove from water as soon as thoroughly cold. Drain well.

PACKING—Pack in 2% brine in liquid-proof containers. Rush to freezer.

CARROTS

PREPARATION—Wash; scrape. Slice or dice if desired.

BLANCHING—If sliced or diced, blanch 2–3 minutes, if small and whole blanch 3–5 minutes, by steaming or immersing in boiling water. Drain. Plunge at once into ice water or place under cold running water. Remove from water as soon as thoroughly cold. Drain well.

PACKING—Pack in 2% brine in liquid-proof containers. Rush to freezer.

CORN

PREPARATION—Husk; carefully remove all silks.

BLANCHING—If corn is to be cut from cobs, blanch 2–4 minutes, corn on the cob, 7–10 minutes, by steaming or immersing in boiling water. Drain. Plunge at once into ice water or place under cold running water. Remove from water as soon as thoroughly cold. Drain well.

PACKING—*Cut corn*: Pack dry in liquid proof containers. Rush to freezer. *Corn-on-cob*: Wrap each ear in waxed paper; twist ends. Pack in liquid-proof containers. Rush to freezer.

PEAS, GREEN

PREPARATION—Shell; wash; discard imperfect peas.

BLANCHING—Blanch 1 minute by steaming or immersing in boiling water. Drain. Plunge at once into ice water or place under cold running water. Remove from water as soon as thoroughly cold. Drain well.

PACKING—Pack in 2% brine in liquid-proof containers. Rush to freezer.

SPINACH AND OTHER GREENS

PREPARATION—Wash thoroughly in several waters. Pick over; discard wilted leaves and tough stems.

BLANCHING—Blanch 1-2 minutes by steaming or immersing in boiling water. Drain. Plunge at once into ice water or place under cold running water. Remove from water as soon as thoroughly cold. Drain well.

PACKING—Pack dry in liquid-proof containers. Rush to freezer.

Pickles and Relishes

WHEN the bulk of essential canning is done, and the shelves of the preserve closet are stocked with jars and cans of fruits and vegetables, it is time to start the pleasant task of pickling and preserving. Then come the days when a tantalizing, sweet, spicy fragrance drifts from the kitchen and is wafted throughout the house. Autumn is just around the corner!

With homemade pickles, relishes, chutneys and spiced pickled fruits to call upon, the most ordinary meal can be lifted above the commonplace to the level of a sumptuous feast (Plate 13).

There are a few simple principles which must be thoroughly understood if success is to be assured. Pickling is, of course, one method of food preservation. The preserving agents may be brine (salt solution), acid (vinegar), acid plus sugar, and spices.

Salt, in addition to its preservative qualities, improves flavor, makes vegetables firm, deepens green color, and causes the vegetables to become translucent. Added to water in varying amounts, it makes *brines* of different strengths. Table salt, which contains a filler to prevent caking, should not be used to make brine. Instead, use cooking salt or dairy salt, put up in cloth bags. *Never use hard water* to make brine. The iron in it turns pickles black, and the lime, magnesia and soda interfere with the curing process. If clean rain water is not available in sufficient quantities, soften hard water as follows: Boil; cool; strain through several layers of cheesecloth; add 1 tablespoon vinegar to each quart of water.

To make brine, dissolve the salt in part of the water, then add the remaining water and mix thoroughly. The amount of

brine needed is approximately one-half the volume of the vegetables.

The following table indicates proportions of salt and water to use for brines of various strengths:

<i>Percentage of Solution</i>	<i>Salt (pounds)</i>	<i>Water (pints)</i>	<i>Percentage of Solution</i>	<i>Salt (pounds)</i>	<i>Water (pints)</i>
5	$\frac{1}{2}$	9	15	$1\frac{1}{2}$	8
10	1	9	20	2	8

Brine causes pickles to ferment. Fermentation takes time, and while commercial packers prefer this method because it makes superior pickles, homemakers may find it a rather tedious process.

During fermentation scum will form on top of the brine. This scum must be removed as it appears or the top layer of pickles will spoil. If this should happen, remove the top layer, and add more brine. The level of brine should be at least 1 inch above the pickles.

When bubbles cease to appear and the pickles have acquired an even deep olive green color, fermentation is complete.

The recipes for fermented pickles given in this chapter include complete instructions regarding fermentation.

Vinegar controls fermentation and adds flavor and aroma to pickled products. Cider vinegar is best for pickling. If it contains any sediment, strain it carefully through several layers of cheesecloth before using.

Granulated sugar and *brown sugar* are both used in making sweet pickles and relishes. In times of sugar shortage, honey or corn syrup may be used to replace from one-third to one-half the amount of sugar called for in the recipe.

Spices add flavor and fragrance to pickles and act as an additional preservative. If whole spices are tied in a cloth bag the syrup remains clear.

Grape leaves placed in the containers in which pickles are packed add a spicy flavor of their own and improve the green color of the pickles.

EQUIPMENT FOR PICKLING

Do not use copper or brass utensils for making pickles. These metals react with acid to form poisonous salts. Iron utensils cause pickles to turn black.

Enamelware, aluminum, earthenware and glass utensils are all excellent. Avoid deep, narrow utensils.

Use wooden, aluminum, enamel or silver spoons for stirring. It is best to put up pickles and relishes in small containers which hold just enough for one or two meals.

CAUSES OF FAILURE

Soft, slippery pickles result when the brine is too weak, or when the pickles are exposed to the air above the brine. To avoid this difficulty, maintain the strength of the brine during fermentation by adding salt from time to time as directed in the recipes, and be sure that the brine covers the pickles to a depth of at least 1 inch.

Hollow pickles that float on the brine occur when there is too long a delay between gathering and brining. Not more than 24 hours should elapse before the cucumbers are put into the brine.

Do not discard hollow pickles. Remove them and use them, chopped, in mixed pickles or relishes.

Shriveled pickles occur when the brine or vinegar or sugar solution is too strong at the start. It is best to begin with a weak solution and follow with a stronger one.

RECIPES FOR PICKLES AND RELISHES

BREAD AND BUTTER PICKLES

12 medium cucumbers
8 medium onions, peeled
4 green peppers
 $\frac{3}{4}$ cup cooking salt
 $6\frac{1}{2}$ quarts water

7 cups sugar
6 cups vinegar
3 tablespoons celery seed
 $\frac{1}{4}$ cup white mustard seed
1 teaspoon turmeric

Wash cucumbers, onions and green peppers; slice thin. Soak in brine made by dissolving the salt in 6 quarts of the water; drain. Combine sugar, vinegar, remaining water and spices in a large kettle; bring to a boil; boil 3 minutes; add vegetables; boil 20 minutes or until vegetables are clear. Fill into hot, sterilized containers. Seal at once.

CHOW CHOW

12 small cucumbers	2 quarts string beans
2 quarts small green tomatoes	Salt
3 red peppers (sweet)	4 ounces mustard seed
1 cauliflower	2 ounces turmeric
2 green peppers	$\frac{1}{2}$ ounce allspice
2 bunches celery	$\frac{1}{2}$ ounce pepper
2 cups small white onions	$\frac{1}{2}$ ounce cloves
1 gallon vinegar	

Cut vegetables in small pieces; combine. Put a layer of vegetables in crock; sprinkle liberally with cooking salt. Repeat until all vegetables are used. Let stand 24 hours; drain. Combine spices and vinegar; bring to a boil; add vegetables; simmer until vegetables are soft. Fill, boiling hot, into hot sterilized containers. Seal at once

DILL PICKLES

Place a layer of dill in the bottom of a crock. Fill the crock within 3 inches of the top with fresh, clean cucumbers of uniform size. Top with a layer of dill. If possible, end with a layer of grape leaves. Make an acid brine, using 1 pound cooking salt, 2 cups vinegar and 2 gallons of water. Pour into crock. (The level of the brine should be at least 1 inch above cucumbers.) Cover with a plate. Place a heavy weight on top. Room temperature should be about 85° F. for best results. Remove scum daily. Fermentation should be completed in two weeks. If bubbles have ceased to form and cucumbers are deep green, with a pleasant flavor, you can be sure curing is complete. Transfer pickles to sterilized glass

jars. Add a small quantity of dill to each jar. Bring brine to a boil; cool to about 160° F. and pour over the pickles, filling jars brimful. Seal at once.

EFFIE'S BOSTON PICKLE

½ peck green peppers	¼ pound white mustard seed
1 large head cabbage	1 ounce celery seed
12 large onions	½ teaspoon turmeric powder
6 ripe cucumbers	1 teaspoon black pepper
2 red peppers (sweet)	¼ pound dry mustard
3 quarts vinegar	1 cup olive oil
3 pounds brown sugar	1 teaspoon curry powder
1 pint vinegar	

Chop vegetables fine; combine. Put a layer of vegetables in a crock; sprinkle liberally with cooking salt. Repeat until all vegetables are used. Let stand 24 hours; drain. Combine 3 quarts vinegar, brown sugar, mustard seed, celery seed, turmeric and pepper; bring to a boil; boil 5 minutes; pour over vegetables; cool. Drain; bring vinegar solution to a boil again; pour over vegetables again. Mix mustard, olive oil, curry powder and 1 pint vinegar; add to vegetables; mix well. Pack in hot sterilized containers. Seal.

FERMENTED PICKLES (SOUR)

50 cucumbers, 3 inches long	1 teaspoon alum
3 quarts water	3 quarts water
3¾ cups cooking salt	1½ quarts vinegar
1½ quarts water	

Wash cucumbers thoroughly. Place in crock. Combine 3 quarts water and 1¼ cups of the salt to make a brine; pour over cucumbers. Be sure level of brine is at least 1 inch above cucumbers. Set a plate, wrapped in cheesecloth, on cucumbers, topped with a heavy weight. Let stand 24 hours. Place 1 cup of the remaining salt on top of the plate. Do not allow salt to touch cucumbers. Replace weight. Let stand 1 week. Remove weight and plate. Skim off scum. Wash plate and

weight. Cover plate with clean cloth and replace plate. Put $\frac{1}{4}$ cup salt on plate. Replace weight. Repeat for 5 weeks, until all of salt is used. One week after last salt is added, rinse pickles 6 times in cold water. Cover with cold water and let stand 24 hours. Add alum to 3 quarts of water. Add pickles and bring to a boil. Drain. Wash pickles at least 3 times in cold water. Replace in crock and cover with vinegar and $1\frac{1}{2}$ quarts water combined. Let stand 5 days. Pack pickles in jars, cover with full strength vinegar. Seal.

FERMENTED PICKLES, (SWEET)

After pickles have stood in vinegar solution 5 days, remove and cut in halves lengthwise. Pack in sterilized jars. Combine $3\frac{1}{2}$ cups vinegar, $3\frac{1}{2}$ cups sugar, 12 whole cloves, 1 (2-inch) stick cinnamon and 6 allspice berries. Bring to a boil; pour over pickles. Seal.

LU'S GREEN TOMATO SWEET PICKLES

1 peck green tomatoes	1 quart vinegar
6 medium onions	3 tablespoons mixed pickle spices
	4 pounds brown sugar

Slice tomatoes and onions thin; sprinkle with salt and let stand overnight in a crock, with a plate and heavy weight on top. Drain; scald in water to which a little vinegar has been added; drain. Combine vinegar, spices and sugar; bring to a boil. Add tomatoes and onions; boil until tender. Fill, boiling hot, into sterilized jars. Seal.

MUSTARD PICKLE

2 large heads cauliflower	1 quart sliced large cucumbers
1 quart tiny white onions	1 quart gherkin cucumbers
1 quart small green tomatoes, quartered	1 gallon vinegar
1 quart large green tomatoes, sliced	$\frac{1}{2}$ cup salt
10 green peppers, diced	3 cups sugar
	1 ounce turmeric
	$1\frac{1}{2}$ cups flour
	$\frac{1}{2}$ pound dry mustard



PHOTOGRAPH BY H. I. WILLIAMS

Picre 13. Sugar and spice and everything nice — that's what home-made pickles are made of!



PHOTOGRAPH BY B. J. WILLIAMS

FIGURE 14 Pickled pears in hot, sterilized jars. Fill jars with
boiling hot syrup.

Separate heads of cauliflower into flowerets. Combine with other vegetables, except cucumbers, and place in a large kettle. Heat vinegar to boiling point; pour over vegetables; bring to a boil. Mix salt, sugar, turmeric, flour and dry mustard to a thin paste with a little cold vinegar; add to hot mixture, stirring to avoid lumping. Add cucumbers, bring to a boil, stirring constantly. Fill into hot, sterilized containers. Seal.

OIL PICKLES

75 small cucumbers (4 inches long)	2 tablespoons celery salt
$\frac{1}{2}$ cup salt	2 teaspoons white mustard seed
1 pound small white onions, sliced	$1\frac{1}{2}$ cups salad oil
	1 quart vinegar

Slice cucumbers without peeling; sprinkle with salt; let stand overnight. Drain; add onions, celery salt and mustard seed. Add oil to vinegar gradually, beating constantly; pour over cucumbers and onions; mix well. Fill into hot sterilized jars. Seal.

PICKLED ONIONS

Drop small white onions in boiling water, let stand 2 minutes; plunge into cold water; slip off skins. Cover with brine ($1\frac{1}{2}$ cups salt to 2 quarts boiling water); let stand 2 days. Drain; cover with more brine; let stand 2 days; drain. Make more brine; bring to a boil; add onions; boil 3 minutes. Pack onions in containers. Add a few white peppercorns, whole cloves, bits of bayleaf and strips of pimiento to each jar. Make a syrup by boiling vinegar and sugar together ($\frac{1}{4}$ cup sugar to each quart of vinegar). Fill containers with boiling hot syrup. Seal.

QUICK SOUR PICKLES

Wash small cucumbers; cover with weak brine (1 cup salt to 1 gallon water). Let stand 24 hours; drain. Cover with a mixture of 1 part vinegar to 3 parts water. Bring to a boil;

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simmer 3 minutes. Pack into hot sterilized containers. Fill containers with boiling vinegar solution. Seal.

QUICK SWEET PICKLES

Wash small cucumbers; cover with weak brine (1 cup salt to 1 gallon water). Let stand 24 hours; drain. Combine 1 quart vinegar, 1 cup sugar, 1 stick cinnamon, 1 teaspoon mustard seed, $\frac{1}{2}$ teaspoon whole cloves and $\frac{1}{2}$ teaspoon allspice berries; pour over cucumbers; bring to a boil; boil 3 minutes. Pack, boiling hot, into hot sterilized jars. Seal.

RIPE CUCUMBER PICKLES

10 medium-sized ripe cucumbers	2 pounds sugar
Vinegar	2 (2-inch) sticks cinnamon
2 teaspoons whole cloves	

Peel cucumbers; cut in halves lengthwise; scoop out seeds and soft pulp. Slice each half diagonally in pieces 1-1 $\frac{1}{2}$ inches long. Cover with vinegar. Let stand overnight; drain. Combine 1 quart vinegar, sugar and spices; bring to a boil. Cook a few slices of cucumber at a time in this syrup until just tender. Pack in hot sterilized jars. Boil syrup down until thick; strain; pour over cucumbers. Seal.

SAYBROOK CHUNK PICKLES

1 peck cucumbers	Dill
$\frac{1}{2}$ cup salt	2 cups cider vinegar
1 teaspoon powdered alum	2 cups water
Grape leaves	2 cups sugar
Green grapes	1 teaspoon mixed pickling slices

Wash cucumbers and cut in chunks. Sprinkle with salt; cover with water. Let stand 24 hours; drain, saving brine. Heat brine to boiling; add alum. Pour over cucumbers; let stand 12 hours; drain. Place containers in pan of hot water. Place grapeleaf in each container; fill containers with cucumber chunks. Add 3-4 grapes and a small sprig of dill to each container. Heat until cucumbers are warmed through. Com-

bine vinegar, water, sugar and spices; bring to boil; pour into containers. Place grape leaf on top. Seal.

WATERMELON RIND PICKLES

Remove green peel from rind; cover rind with weak brine (2 tablespoons salt to each quart of water). Let stand overnight. Drain; cover with fresh water; cook until tender. Weigh rind. For each 2 pounds use $4\frac{1}{2}$ cups sugar, 2 cups water, 1 thinly sliced lemon, 2 cups vinegar, 2 sticks (2-inch) cinnamon, 1 teaspoon whole cloves, 1 teaspoon allspice berries. Boil together 5 minutes; add rind and cook until clear. Pack hot rind in hot sterilized jars. Fill jars with boiling syrup. Seal.

CHUTNEYS

APPLE CHUTNEY

12 tart apples	$\frac{1}{2}$ cup tart jelly
2 medium onions	2 cups sugar
2 green peppers	4 lemons, juice and grated rind
2 cups vinegar	1 teaspoon ginger
1 cup seedless raisins	1 teaspoon salt

Pare, core and slice apples. Mince onions and peppers; add to apples with vinegar. Boil 1 hour. Add remaining ingredients; mix well. Boil until thick, stirring constantly. Pack, boiling hot, in hot sterilized jars. Seal.

HELEN RIDLEY'S CHUTNEY

6 cups chopped green tomatoes	2 lemons, seeded and thinly sliced
6 cups chopped peeled apples	$2\frac{1}{2}$ cups cider vinegar
4 cups chopped peeled quinces	2 pounds dark brown sugar
2 cups chopped honeydew melon	2 cups seedless raisins
2 cups chopped shallots	1 tablespoon mustard seed
12 tiny red chili peppers, seeded and chopped	1 teaspoon salt

Combine tomatoes, apples, quinces, melon, shallots, chili peppers, lemon slices and vinegar. Cook about $\frac{1}{2}$ hour, or

until ingredients are soft, stirring occasionally. Add remaining ingredients; cook over low heat until thickened (about 1-1½ hours). Watch carefully and stir often to prevent scorching. Fill, boiling hot, into hot sterilized jars. Seal.

PEACH-GINGER CHUTNEY

1 medium onion	1 cup chopped crystallized ginger
1 small garlic clove, peeled	2 tablespoons mustard seed
½ pound seedless raisins	1 tablespoon salt
4 pounds fresh peaches	1 quart vinegar
2 tablespoons chili powder	1¼ pounds brown sugar

Put onion, garlic and raisins through food chopper, using the fine knife. Peel and dice peaches; mix with chili powder, ginger, mustard seed, salt, vinegar and brown sugar. Add onion, garlic and raisin mixture. Mix well. Simmer 1 hour or until deep brown in color and rather thick. Pack, boiling hot, in hot sterilized jars. Seal.

GREEN TOMATO MINCEMEAT

1 quart chopped green tomatoes	1 teaspoon ground mace
1½ quarts chopped tart apples	3 teaspoons salt
2 pounds brown sugar	1 package (15 ounces) seedless raisins
1 cup granulated sugar	1 package (15 ounces) seeded raisins
½ cup vinegar	1 package (8 ounces) currants
1 teaspoon ground cloves	½ pound mixed sliced citron, lemon and orange peel
4 teaspoons ground cinnamon	
1½ teaspoons ground allspice	
1 teaspoon ground nutmeg	

Combine all ingredients. Simmer until thick, stirring often. Pack boiling hot into hot sterilized containers. Seal.

OLD-FASHIONED MINCEMEAT

6 pounds cooked lean beef	2 cups sweet cider
2 pounds citron	2 cups beef stock
2 pounds suet	2 tablespoons allspice
10 pounds apples	2 tablespoons mace
3 pounds seedless raisins	2 tablespoons cloves
3 pounds currants	2 tablespoons cinnamon
4 pounds brown sugar	3 tablespoons salt

Put beef, citron, suet and apples through food chopper using medium knife; combine with remaining ingredients; mix well. Simmer 1 hour, or until thick, stirring often. Fill, boiling hot into hot sterilized containers. Partially seal. Process in water-bath canner 10 minutes. Complete seal.

PICKLED CRABAPPLES

3 pounds crabapples	1½ teaspoons peppercorns
1½ teaspoons whole cloves	1½ teaspoons ginger
2 teaspoons allspice berries	2 cups vinegar
1 cup sugar	

Wash crabapples; remove stems; steam until soft. Tie spices in cloth bag; put in kettle; add vinegar, sugar and apples; simmer 20–30 minutes. Pack crabapples in hot sterilized jars. Bring syrup to a boil; remove spice bag; fill jars with syrup. Seal.

SPICED CRANBERRIES

10 pounds cranberries	5 cups water
9 cups firmly packed brown sugar	4 tablespoons ground allspice
3 cups vinegar	4 tablespoons ground cinnamon
	2 tablespoons ground cloves

Wash and pick over cranberries; put through food chopper. Combine with remaining ingredients; bring to a boil; boil until thick, stirring often. Fill into hot sterilized jars. Seal. Yield: 10 pints.

SPICED CURRANTS

5 pounds red currants	2 tablespoons cinnamon
1 tablespoon ground cloves	5 pounds sugar
2 cups vinegar	

Wash currants; remove stems. Cook without water 20 minutes. Add remaining ingredients. Boil gently 10 minutes. Fill into hot sterilized jars. Seal.

PICKLED PEACHES

6 cups sugar	2 tablespoons allspice berries
3 cups vinegar	2 (2-inch) sticks cinnamon
3 cups water	8 pounds fresh peaches, peeled and
2 tablespoons whole cloves	halved

Combine sugar, vinegar and water in a large kettle. Tie spices in cloth bag; add. Boil 10 minutes. Add peaches; cook 5-8 minutes or until peaches are just tender. Remove spices. Pack peaches in hot sterilized jars. Fill jars with boiling hot syrup. Seal.

PICKLED PEARS

Substitute 8 pounds medium-sized pears for peaches (Plate 14).

KETCHUPS AND CHILI SAUCE

APPLE KETCHUP

1 quart sieved apple pulp	1 teaspoon dry mustard
1 cup sugar	2 teaspoons cinnamon
1 teaspoon pepper	1 tablespoon salt
1 teaspoon ground cloves	2 onions, minced
2 cups vinegar	

Combine all ingredients; mix well. Bring to a boil; simmer 1 hour. Fill, boiling hot, into hot sterilized containers. Seal.

CELERY KETCHUP

24 ripe tomatoes	2 red peppers (sweet)
2 bunches celery	2 tablespoons salt
8 large onions	2 cups vinegar
1 pound brown sugar.	

Cut vegetables fine. Add remaining ingredients. Bring to a boil and boil slowly $1\frac{1}{2}$ hours. Fill, boiling hot, into hot sterilized containers. Seal.

CHILI SAUCE

18 tomatoes	2 teaspoons salt
2 green peppers	1 teaspoon ground cinnamon
2 medium onions	½ teaspoon ground cloves
1½ cups sugar	1 teaspoon allspice
2 cups vinegar	

Peel, core and chop tomatoes. Chop peppers and onions fine. Combine all ingredients. Boil slowly 4 hours or until sauce reaches desired thickness. Fill, boiling hot, into hot sterilized containers. Seal.

CRANBERRY KETCHUP

4 pounds cranberries	1 tablespoon ground cloves
1 pound onions, chopped	1 tablespoon ground cinnamon
2 cups water	1 tablespoon pepper
4½ cups sugar	1 tablespoon ground allspice
2 cups vinegar	1 tablespoon salt

Combine cranberries, onions and water. Cook until tender; rub through a sieve. Add remaining ingredients. Boil until thick, stirring often. Fill into hot sterilized containers. Seal.

GRAPE KETCHUP

10 pounds Concord grapes	8 (2-inch) sticks cinnamon
1 quart vinegar	2 tablespoons whole cloves
13 cups sugar	2 tablespoons whole allspice
1 tablespoon salt	4 pieces ginger root
4 blades mace	

Wash grapes; simmer without water about 20 minutes or until tender, stirring often. Press through a sieve. Combine grape pulp, vinegar, sugar and salt. Add spices tied in a bag. Cook 34 minutes or until thick, stirring often. Remove spice bag. Fill into hot sterilized containers. Seal.

TOMATO KETCHUP

4 quarts ripe tomatoes	1 tablespoon broken stick cinnamon
2 medium onions	2 teaspoons dry mustard
3 green peppers	1 teaspoon paprika
1 tablespoon celery seed	2 tablespoons salt
1 tablespoon allspice berries	$\frac{1}{3}$ cup sugar
1 tablespoon whole cloves	2 cups vinegar

Wash and core tomatoes; cut in chunks. Slice onions and seeded peppers. Combine tomatoes, onions and peppers; simmer without added water, until tomatoes are soft (5-10 minutes). Rub through a fine sieve. Measure. Simmer until reduced to about $\frac{3}{4}$ original amount. Tie whole spices in a cloth bag. Add with remaining ingredients to pulp. Boil until thick (about 1 hour), stirring often. Remove spice bag. Fill into hot sterilized containers. Seal.

RELISHES

AUTUMN RELISH

2 quarts green tomatoes	3 large onions
1 quart ripe tomatoes	1 large cucumber, peeled
$\frac{1}{2}$ head cabbage	$\frac{1}{2}$ cup salt
3 green peppers	2 cups firmly packed brown sugar
3 red peppers (sweet)	3 pints vinegar
4 stalks celery	1 teaspoon dry mustard

Chop vegetables. Put layer in crock, sprinkle with salt. Continue until vegetables and salt are all used. Cover; let stand overnight. Drain; press out all liquid. Combine vegetables, sugar, vinegar and mustard. Simmer about 1 hour or until transparent. Fill, boiling hot, into hot sterilized containers. Seal.

BEET RELISH

2 quarts coarsely ground cooked beets	3 cups coarsely ground green peppers
13 cups coarsely ground cabbage	$\frac{1}{4}$ cup fresh grated horseradish
1 quart coarsely ground onions	2 tablespoons salt
4 cups sugar	1 quart vinegar

Combine all ingredients. Bring to a boil; cook until thick (about 30 minutes), stirring occasionally. Fill, boiling hot, into hot sterilized jars. Seal.

CHERRY RELISH

2 quarts sour red cherries	1 cup honey
2 cups seeded raisins	1 cup vinegar
½ cup firmly packed brown sugar	2 teaspoons ground cinnamon
	½ teaspoon ground cloves
1½ cups broken pecans	

Wash cherries, remove stones; combine with raisins, sugar, honey, vinegar and spices. Bring to a boil; simmer 1 hour or until thick. Add nuts. Fill, boiling hot, into hot sterilized jars. Seal.

CORN RELISH

24 ears sweet corn	¼ cup salt
4 medium onions, chopped	½ teaspoon pepper
4 green peppers, chopped	3 tablespoons dry mustard
2 red peppers (sweet) chopped	2 cups sugar
2 cups chopped cabbage	1 quart vinegar

Cut corn from cobs; do not scrape cobs. Combine corn, onions, peppers and cabbage. Add remaining ingredients. Simmer 1 hour, stirring occasionally. Fill, boiling hot, into hot sterilized containers.

CUCUMBER RELISH

12 cucumbers	1 pound brown sugar
2 quarts small white onions	1 quart vinegar
3 red peppers (sweet)	2 teaspoons white mustard seed
2 tablespoons salt	1 teaspoon tumeric

Slice cucumbers, onions and seeded red peppers thin. Sprinkle with salt. Let stand 1 hour. Drain. Add remaining ingredients. Cook 45 minutes, or until tender. Fill, boiling hot, into hot sterilized jars and seal.

FRANKFURTER RELISH

3½ pounds red peppers (sweet)	½ cup sugar
3 pounds green peppers	1 teaspoon mustard seed
3 pounds onions	1 tablespoon dry mustard
1 quart vinegar	1 tablespoon celery seed
2 tablespoons salt	

Wash peppers; remove cores and seeds. Peel onions. Put peppers and onions through food chopper, using medium knife. Cover with boiling water; let stand 5 minutes; drain. Add vinegar, sugar, spices and salt. Cook until vegetables are tender, about 15 minutes, stirring occasionally. Fill, boiling hot, into hot sterilized jars. Seal.

INDIAN RELISH

2 quarts green tomatoes	½ cup mustard seed
1 small cabbage	1 teaspoon celery seed
6 medium onions	1 cup sugar
12 green peppers, seeded	2 cups vinegar
¼ cup salt	1 tablespoon dry mustard

Chop tomatoes, cabbage, onions and peppers fine. Sprinkle with salt. Let stand overnight. Drain. Add mustard seed, celery seed, sugar and all but 1 tablespoon vinegar. Cook 5 minutes. Add dry mustard mixed with the 1 tablespoon vinegar. Mix well. Fill, boiling hot, in hot sterilized containers. Seal.

PEPPER HASH

2 pounds seeded red peppers (sweet)	3 pounds onions, peeled
	Water
2 pounds seeded green peppers	1 quart vinegar
1 pound sugar	

Put peppers and onions through food chopper, using medium knife. Add 4 quarts of water. Let stand 5 minutes; drain. Add 1 pint vinegar and 2 quarts water. Bring to a boil; drain; press-

ing lightly. Add remaining vinegar and sugar; mix well. Bring to a boil. Pack, boiling hot, in hot sterilized jars. Seal.

PICCALILLI

2 pounds onions	2 tablespoons white mustard seed
1 pound green peppers	2 tablespoons celery seed
5 pounds green tomatoes	2 tablespoons salt
3½ pounds cabbage	2 quarts vinegar
5 cups sugar	

Peel onions; seed green peppers; put vegetables through food chopper, using medium knife. Combine all ingredients. Cook until slightly thickened and vegetables are tender (about 20 minutes), stirring occasionally. Fill, boiling hot, into hot, sterilized containers. Seal.

How to Make Jelly

PERFECT jelly is beautiful to look at and delicious to eat. It is as clear, sparkling and translucent as a gem. When it is turned out of a glass, it quivers, yet holds its shape. And when it is cut, the spoon leaves a sharp cleavage. Its texture is tender; its flavor is fresh and fruity; it spreads easily; and its color is bright and jewel-toned.

There is no excuse for tough, rubbery jelly or jelly that contains sediment or crystals. The rules for making perfect jelly are simple, and if they are followed to the letter there will be no sorry failures and waste of good material.

Only three things are needed for perfect jelly—pectin, acid and sugar—but each must be present in the right proportion.

PECTIN

Pectin is present in the cell walls of fruits, and it is the substance which makes jellies jell. Fruits vary in the amount of pectin they contain. Ripeness affects the quantity of pectin, and so does the weather. Tests have shown that a dry season produces fruit with more pectin and less juice, while fruits that grow during a wet season are juicier, but contain less pectin.

Fruits also vary in acid content. Certain fruits have enough pectin but not enough acid, while others have plenty of acid but too little pectin. And, unfortunately, fruits that are classified as rich in pectin may vary from season to season in their pectin content.

As fruits ripen, their pectin content decreases, and it is not at all easy to be sure that fruits have reached just the right degree of ripeness in reference to pectin.

Many fruits do not have enough pectin to jell all the juice

they produce, and that is why fruit juice is "boiled down" before the sugar is added.

There is no easy way to find out whether fruit juice contains enough pectin to jell satisfactorily. But there are two tests that can be made, if desired.

Epsom salt test. Combine 1 tablespoon fruit juice, 1 teaspoon sugar and $1\frac{1}{2}$ teaspoons Epsom salts, stirring until sugar and salts are dissolved. Let stand 20 minutes. If a solid mass forms, the juice will make satisfactory jelly.

Alcohol test. Combine 1 tablespoon of fruit juice and 1 tablespoon denatured alcohol (POISON). If the pectin precipitates in a solid mass, the juice will make satisfactory jelly. If it precipitates in flakes, the juice must be boiled down, or combined with a juice high in pectin, or used with commercial pectin. Throw away the residue—it is poison.

Fruits can be classified as to their approximate content of pectin and fruit acid, although, as we have explained, fruits vary greatly and this classification cannot be entirely depended upon.

FRUITS RICH IN PECTIN AND ACID

Apples (sour)	Guavas (sour)
Blackberries (sour)	Lemons
Cranberries	Oranges (sour)
Currants (red)	Plums (sour)
Gooseberries	Prunes (sour)
Grapes (Concord and wild)	Quinces (unripe)
Youngberries	

FRUITS RICH IN PECTIN, LOW IN ACID

Apples (sweeter varieties)	Crabapples
Blackberries (ripe)	Guavas (ripe)
Blueberries	Loganberries
Cherries (sweet)	Prunes (sweet)
Quinces (ripe)	

The addition of lemon juice in the proportion of $\frac{1}{2}$ –1 tablespoon per cup of juice will increase the acid content sufficiently.

FRUITS RICH IN ACID, LOW IN PECTIN

Apricots	Pomegranates
Cherries (sour)	Rhubarb
Pineapple	Strawberries

These fruits must be combined with other fruits rich in pectin, or commercial pectin must be added.

FRUITS LACKING BOTH ACID AND PECTIN

Elderberries	Pears
Peaches	Raspberries
All overripe fruit	

Juice from these fruits, with the exception of overripe fruit, can be made into fine jelly if commercial pectin is added.

COMMERCIAL PECTIN

Juices from practically any fruits, at the peak of ripeness, will jell if commercial pectin is added in the correct proportions and if special directions are followed carefully. Commercial pectin is made in either liquid or powdered form, from natural fruit pectin, extracted from fruits and concentrated to standard strength.

Commercial pectin offers several advantages. If directions are followed there is no guesswork and no waste. The short cooking period saves time, insures better flavor and color, and increases the yield by as much as one-third to one-half. Ripe, full-flavored fruits can be used, and as a result the jellies have a rich, full-bodied flavor.

SUGAR

The old-fashioned rule of thumb that says to use 1 cup of sugar to 1 cup of juice is far from infallible, and has probably caused many failures. The amount of sugar to be added depends on the variety of fruit that is used and on the degree of ripeness, as is shown in the following chart. (If commercial

pectin is used, the proportion is different—follow directions exactly.)

<i>Kind of Juice</i>	<i>Amount of Juice</i>	<i>Amount of Sugar*</i>
Apple	1 cup	$\frac{3}{4}$ –1 cup
Apple (crab)	" "	1 cup
Blackberry (sour)	" "	$\frac{3}{4}$ –1 cup
Blackberry (sweet)	" "	$\frac{2}{3}$ cup
Blueberry	" "	" "
Cranberry	" "	$\frac{3}{4}$ cup
Currant (red)	" "	1 cup
Gooseberry	" "	" "
Grape	" "	$\frac{3}{4}$ –1 cup
Grape (wild)	" "	1 cup
Plum	" "	$\frac{2}{3}$ – $\frac{3}{4}$ cup
Quince	" "	" " "
Raspberry	" "	" " "
Apple + blackberry	$\frac{1}{2}$ cup each	$\frac{3}{4}$ cup
Apple + blueberry	" " "	" "
Apple + cherry	" " "	$\frac{2}{3}$ – $\frac{3}{4}$ cup
Apple + elderberry	" " "	$\frac{3}{4}$ cup
Apple + peach	" " "	$\frac{2}{3}$ – $\frac{3}{4}$ cup
Apple + pineapple	" " "	" " "
Apple + black raspberry	" " "	" " "
Apple + rhubarb	" " "	" " "
Apple + strawberry	" " "	" " "
Currant + red raspberry	" " "	1 cup
Currant + rhubarb	" " "	" "

* For riper fruit use the smaller amount of sugar.

SUGAR SUBSTITUTES

In times of sugar shortages it is possible to substitute other sweetening for part of the sugar called for in a jelly recipe. Either light corn syrup or mild-flavored, strained honey may be substituted for *half* the sugar. When honey is used, be sure to use a large kettle, because the mixture will foam while cooking. Also, cook slightly beyond the usual jelly test. This test is explained farther along in this chapter.

It is best not to use more than 2 cups of a sugar substitute in a given recipe.

EQUIPMENT FOR JELLY-MAKING

Kettle for cooking fruit	Long-handled spoon
Broad, shallow kettle	Ladle
Measuring cup	Funnel (optional)
Scales	Glasses and covers
Jelly bag	Paraffin
Teapot or pitcher	Labels
(for pouring paraffin)	

JELLY-MAKING—STEP BY STEP.

(without added pectin)

PREPARATION—Select fruit that is ripe enough for flavor; add some underripe fruit for its pectin content. Wash thoroughly; remove stems (except in the case of currants). Remove any bad spots or signs of decay.

EXTRACTING JUICE—Add water according to the type of fruit. Cook just long enough to extract the maximum amount of juice—overcooking breaks down the pectin and causes loss of flavor. Soft fruits need 5–10 minutes of cooking, hard fruits 15–30 minutes. Soft, juicy fruits, such as berries and currants, should be crushed slightly *before* cooking, to start the juice flowing. Other soft fruits should be crushed and stirred *during* cooking, to free the juice.

<i>Type of Fruit</i>	<i>Amount of Water</i>
Apples	Enough to cover
Berries	Little or none
Crabapples	Enough to cover
Cranberries	3 cups per pound
Currants	$\frac{1}{4}$ cup per pound
Gooseberries	" " " "
Grapes	" " " "
Plums	$\frac{1}{2}$ " " "
Quinces	Enough to cover

As a general rule, 1 pound of juicy fruit will yield 1 cup of juice. This, plus $\frac{3}{4}$ cup of sugar, will fill one 8-ounce jelly glass.

STRAINING JUICE—To make perfectly clear and sparkling jelly, the juice must drip through wet Canton flannel or a jelly bag. This takes from 2–3 hours. However, a newer and shorter method produces a satisfactorily clear jelly: Strain the hot juice through wet, doubled cheesecloth, pressing with a spoon.



PHOTOGRAPH BY GUIDA RAWLINGS STUDIOS, INC

Plate 15A. Perfect jelly — clear, sparkling, translucent.



PHOTOGRAPH COURTESY OF GENERAL FOODS CORPORATION

Plate 15B. When commercial pectin is added, jelly can be made with fruit that is fully ripe.



PHOTOGRAPH BY H. I. WILLIAMS

Plate 16A. Pour jelly quickly into clean, hot glasses



COURTESY OF GENERAL FOODS CORPORATION

Plate 16B. Paraffin jelly as soon as poured. When cold, put on covers

The pulp that remains may be used to make a fruit butter (Chapter 12) or to make a second extraction of juice.

SECOND EXTRACTION OF JUICE—If the fruit is rich in acid and pectin, a second extraction of juice may be made from the pulp. Return the pulp to the kettle and add just enough water to cover. Bring to a boil and simmer 30 minutes. Strain as before. This juice will be weaker in pectin and will need less sugar. If desired, the first and second extractions may be combined, using the amount of sugar required by the first extraction.

GLASSES AND COVERS—Jelly glasses and covers should be washed thoroughly, scalded and thoroughly drained before using.

MAKING THE JELLY—It is always best to make jelly in small batches, working with from 4 to 6 cups of juice at a time.

Measure the juice. Taste it and, if it seems lacking in tartness, add lemon juice— $\frac{1}{2}$ to 1 tablespoon to each cup of juice.

Boil the juice 5 minutes.

Add measured sugar.

Bring to a full, rolling boil and boil rapidly to jelly stage.

THE JELLY TEST—Dip a spoon in the syrup and let it run off the side of the spoon. At first it will run off rapidly, in a single stream. Later it will form two slow streams. When these two streams merge and form a sheet which shears away from the edge of the spoon, making a clean break, the jelly has cooked long enough.

A candy thermometer may be used as a check, but it is wise to make the spoon test, too. Most jellies have cooked long enough when the thermometer reaches 219°–221° F. Apple needs a temperature of 221°–223° F. and grape or currant 223°–224° F.

When this stage is reached, remove the jelly from the heat at once and skim.

FILLING THE GLASSES—Pour the jelly into the glasses immediately, using a ladle or a cup. A small funnel is convenient. Fill the glasses to within $\frac{1}{2}$ inch of the top (Plate 16A).

Jelly may be packed in tin cans. Pour, hot, into the cans and seal at once. Cool cans immediately under running cold water.

PARAFFIN—As soon as the glasses are filled, pour a layer of melted paraffin on top. A small teapot is excellent for this job. Tilt the glass so that the hot wax runs up around the edges. The paraffin protects the jelly from dust and from bacteria in the air that cause mold (Plate 16B).

Always melt paraffin over hot water, not over direct heat.

COVERS—Wait until the jelly is cold before putting on the covers.

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LABELS—Each label should include the following information: Name of jelly; date (day, month, year) and lot number if more than one batch of a kind is made.

STORAGE—Jelly keeps best if it is stored in a cool, dark place.

FAILURES—CAUSES AND CURES

Cloudy jelly. Cloudiness may be caused by overcooking before the sugar is added, by not skimming thoroughly, or by letting the jelly stand before pouring it into the glasses.

Crystals. Crystals may form a jelly that contains too much sugar. Or, if the juice is cooked too long before adding the sugar, crystals may form. Crystals in *grape jelly* are cream of tartar, not sugar crystals. To avoid this condition, (1) let the grape juice remain overnight in a cold place. The next morning, dip the juice out carefully, so as not to disturb the crystals that have formed and re-strain it. (2) Can the unsweetened juice; process 15–18 minutes in a water-bath canner. Let it stand 2–3 months, during which time the crystals will form and settle to the bottom. Strain off the juice and make into jelly. (3) Use equal parts of apple juice and grape juice.

Fermented jelly. Jelly may ferment if it is exposed to the air too long before it is protected by paraffin, or if the paraffin loosens during storage.

Gummy or rubbery jelly. This condition is caused by overcooking or too slow cooking.

Moldy jelly. The same conditions that cause fermentation (above) may cause mold to form on jelly.

Soft jelly. If too much sugar is added, or if the juice and sugar are not cooked long enough, the jelly may remain too soft.

Tough jelly. If too little sugar is used, or if the juice and sugar are cooked beyond the jelly test stage, the jelly will be tough.

"Weeping." Liquid from the jelly is sometimes drawn up around the paraffin and overflows the glass. This condition is known as "weeping." It may be caused by fruit that has too high an acid content.

RECIPES FOR JELLY WITHOUT ADDED PECTIN

APPLE JUICE BASE FOR JELLIES

Cut 4 pounds (3 quarts) sour apples into quarters. Do not pare or core. Add 2 quarts water. Cook 20–30 minutes, or until apples are

tender. Strain through a dampened jelly bag. Yield: about 6 cups juice.

APPLE JELLY

Measure apple juice (above). Add 1 cup of sugar to each cup. Stir until sugar dissolves. Boil rapidly until a good jelly test results. Skim; pour into glasses at once. Paraffin. Cool. Put on covers and labels.

APPLE-CRANBERRY JELLY

Cut apples in small pieces; measure. Add equal amount of picked-over washed cranberries. Barely cover with water; boil until fruit is soft. Strain through dampened jelly bag. Extract juice from pulp a second time. Combine the two extractions. Measure. Boil 5 minutes. Add $\frac{3}{4}$ cup sugar for each cup of juice. Stir until sugar dissolves. Boil rapidly until a good jelly test results. Skim. Pour into glasses at once. Paraffin. Cool. Put on covers and labels.

APPLE-LOGANBERRY JELLY

Combine 3 cups apple juice and 3 cups loganberry juice. Boil 5 minutes. Add 4 cups sugar. Stir until sugar dissolves. Boil rapidly until a good jelly test results. Skim. Pour into glasses at once. Paraffin. Cool. Put on covers and labels.

APPLE-PEACH JELLY

Combine 3 cups apple juice and 3 cups peach juice. Boil 5 minutes. Add 4 cups sugar. Stir until sugar dissolves. Boil rapidly until a good jelly test results. Skim. Pour into glasses at once. Paraffin. Cool. Put on covers and labels.

APPLE-RASPBERRY JELLY

Combine 3 cups apple juice and 3 cups raspberry juice. Boil 5 minutes. Add 4 cups sugar. Stir until sugar dissolves. Boil rapidly until a good jelly test results. Skim. Pour into glasses at once. Paraffin. Cool. Put on covers and labels.

APPLE-STRAWBERRY JELLY

Combine 3 cups apple juice and 3 cups strawberry juice. Boil 5 minutes. Add 4 cups sugar. Stir until sugar dissolves. Boil rapidly until a good jelly test results. Skim. Pour into glasses at once. Paraffin. Cool. Put on covers and labels.

BEACH PLUM JELLY

Measure 6 cups beach plum juice made from underripe beach plums. Boil 15 minutes. Add 5 cups sugar. Stir until sugar dissolves. Boil rapidly until a good jelly test results. Skim. Pour into glasses at once. Paraffin. Cool. Put on covers and labels.

CRABAPPLE JELLY

Wash crabapples; remove stem and blossom ends; halve. Barely cover with water. Cook 25 minutes or until fruit is tender. Strain through dampened jelly bag. Measure. Boil 5 minutes. Add 1 cup sugar for each cup of juice. Stir until sugar dissolves. Boil rapidly until a good jelly test results. Skim. Pour into glasses at once. Paraffin. Cool. Put on covers and labels.

CRANBERRY-GRAPE JELLY

Combine 1 cup apple juice, 1 cup cranberry juice and 2 cups grape juice. Boil 5 minutes. Add $2\frac{1}{4}$ cups sugar; stir until sugar dissolves. Boil rapidly until a good jelly test results. Skim. Pour into glasses at once. Paraffin. Cool. Put on covers and labels.

CURRANT JELLY

Measure 6 cups currant juice. Boil 5 minutes. Add 6 cups sugar; stir until sugar dissolves. Boil rapidly until a good jelly test results. Skim. Pour into glasses at once. Paraffin. Cool. Put on covers and labels.

ECONOMY JELLY

When canning apples or making applesauce or pies, save cores and parings. Barely cover with cold water and cook until soft. Strain through dampened jelly bag. Measure. Boil 10 minutes. Add 1 cup sugar for each cup of juice. Stir until sugar dissolves. Boil rapidly until a good jelly test results. Skim. Pour into glasses at once. Paraffin. Cool. Put on covers and labels.

GRAPE JELLY

Measure grape juice. Boil 5 minutes. Add $\frac{3}{4}$ to 1 cup sugar for each cup of juice, depending on ripeness of grapes. Stir until sugar dissolves. Boil rapidly until a good jelly test results. Skim. Pour into glasses at once. Paraffin. Cool. Put on covers and labels.

HERB JELLY

Measure 6 cups apple juice. Add a small bouquet of fresh herbs. Boil 5 minutes. Add $4\frac{1}{2}$ cups sugar; stir until sugar dissolves. Boil rapidly until a good jelly test results. Remove herbs; skim. Put a sprig of herb in each glass. Pour jelly into glasses at once. Paraffin. Cool. Put on covers and labels.

MINT JELLY

Measure apple juice. Add a large bunch of fresh mint. Boil 15 minutes, skimming frequently. Remove mint. Add $\frac{3}{4}$ cup sugar to each cup of juice. Stir until sugar dissolves. Add enough vegetable coloring to tint deep mint green. Boil rapidly until a good jelly test results. Skim. Pour into glasses at once. Paraffin. Cool. Put on covers and labels.

ROSE GERANIUM JELLY

Make like herb jelly, above, putting a rose geranium leaf in each glass before pouring jelly.

OTHER JELLIES

The table on page 117 of this chapter will suggest other jellies, made from a single fruit, or a combination of two, and gives proportions of juices and sugar.

RECIPES FOR JELLY MADE WITH LIQUID PECTIN

When commercial pectin is used, it is extremely important to follow the manufacturer's directions *exactly*. Countless experiments in laboratories and test kitchens have been carried on in order to perfect these directions, so that perfect results are assured.

In general, the steps for making jelly with liquid pectin may be summarized as follows:

1. Prepare juice.
2. Squeeze through a jelly bag. (If dripped juice is preferred, double the amount of fruit called for in the recipe.)

3. Measure juice and sugar into a large saucepan, and mix.
4. Bring juice and sugar rapidly to a boil, over highest heat.
5. Add liquid pectin, stirring constantly.
6. Bring to a full, rolling boil and boil hard exactly $\frac{1}{2}$ minute.
7. Remove from heat; skim; pour quickly.
8. Paraffin at once.

Sugar substitutes. In time of sugar shortages, 2 cups light corn syrup may be substituted for 2 cups of the sugar called for in a recipe for jelly made with liquid pectin. This substitution should never be increased beyond 2 cups or the results will not be satisfactory.

APRICOT JELLY

Select fresh, fully ripe apricots. Weigh 5 pounds. Pit. Add $\frac{3}{4}$ cup water. Bring to a boil; simmer 20 minutes. Place in jelly bag; squeeze out juice. Measure $3\frac{1}{2}$ cups juice into a large saucepan; add $\frac{1}{2}$ cup strained lemon juice. Add 7 cups sugar; mix well. Bring rapidly to a boil over highest heat. Add 1 bottle liquid pectin, stirring constantly. Bring to a full, rolling boil and boil hard $\frac{1}{2}$ minute. Remove from heat. Skim. Pour quickly. Paraffin. Cool. Put on covers and labels.

BERRY MEDLEY JELLY

Measure 3 quarts strawberries and red raspberries mixed in any desired proportion. Crush thoroughly or grind. Place in a jelly bag. Squeeze out juice. Measure 4 cups juice. (If berries lack tartness, substitute $\frac{1}{4}$ cup lemon juice for $\frac{1}{4}$ cup of the juice.) Add $7\frac{1}{2}$ cups sugar; mix. Bring rapidly to boil, over highest heat. Add 1 bottle liquid pectin, stirring constantly. Bring to a full, rolling boil and boil hard $\frac{1}{2}$ minute. Remove from heat. Skim. Pour quickly. Paraffin. Cool. Put on covers and labels.

BLACKBERRY JELLY

Measure 3 quarts of blackberries. Crush thoroughly, or grind. Place in a jelly bag. Squeeze out juice. Measure 4 cups juice. (If berries lack tartness, substitute $\frac{1}{4}$ cup lemon juice for $\frac{1}{4}$ cup of the juice.) Add $7\frac{1}{2}$ cups sugar; mix. Bring rapidly to a boil over highest heat. Add 1 bottle liquid pectin, stirring constantly. Bring to a full, rolling

boil and boil hard for $\frac{1}{2}$ minute. Remove from heat. Skim. Pour quickly. Paraffin. Cool. Put on covers and labels.

BLACKBERRY AND GOOSEBERRY JELLY

Measure 1 quart each of blackberries and gooseberries. Crush thoroughly, or grind. Place in jelly bag and squeeze out juice. Measure 4 cups juice. Add 7 cups sugar. Bring rapidly to a boil over highest heat. Add $\frac{1}{2}$ bottle liquid pectin, stirring constantly. Bring to a full, rolling boil and boil hard for $\frac{1}{2}$ minute. Remove from heat. Skim. Pour quickly. Paraffin. Cool. Put on covers and labels.

BOYSENBERRY JELLY

Measure 3 quarts boysenberries. Crush thoroughly or grind. Place in a jelly bag. Squeeze out juice. Measure 4 cups juice. (If berries lack tartness, substitute $\frac{1}{4}$ cup lemon juice for $\frac{1}{4}$ cup of the juice.) Add $7\frac{1}{2}$ cups sugar; mix. Bring rapidly to a boil over highest heat. Add 1 bottle liquid pectin, stirring constantly. Bring to a full, rolling boil and boil hard for $\frac{1}{2}$ minute. Remove from heat. Skim. Pour quickly. Paraffin. Cool. Put on covers and labels.

DEWBERRY JELLY

Measure 3 quarts dewberries. Crush thoroughly or grind. Place in a jelly bag. Squeeze out juice. Measure 4 cups juice. (If berries lack tartness, substitute $\frac{1}{4}$ cup lemon juice for $\frac{1}{4}$ cup of the juice.) Add $7\frac{1}{2}$ cups sugar; mix. Bring rapidly to a boil over highest heat. Add 1 bottle liquid pectin, stirring constantly. Bring to a full, rolling boil and boil hard for $\frac{1}{2}$ minute. Remove from heat. Skim. Pour quickly. Paraffin. Cool. Put on covers and labels.

ELDERBERRY JELLY

Weigh 4 pounds elderberries. Remove large stems; place in kettle; crush. Heat gently until juice starts to flow. Cover; simmer 15 minutes. Place in jelly bag; squeeze out juice. Measure $3\frac{1}{2}$ cups juice. Add $\frac{1}{2}$ cup strained lemon juice and $7\frac{1}{2}$ cups sugar. Mix well. Bring rapidly to a boil over highest heat. Add 1 bottle liquid pectin, stirring constantly. Bring to a full, rolling boil and boil hard for $\frac{1}{2}$ minute. Remove from heat. Skim. Pour quickly. Paraffin. Cool. Put on covers and labels.

HERB JELLY

(thyme, marjoram or tarragon)

Pour $1\frac{1}{4}$ cups boiling water over 2 tablespoons dried herbs. Cover and let stand 15 minutes. Strain. Measure 1 cup of this herb infusion into a saucepan (add water, if necessary, to make 1 cup). Add $\frac{1}{2}$ cup vinegar and 3 cups sugar; mix well. Set over highest heat and, while mixture is coming to a boil, add vegetable coloring to tint any desired shade. As soon as mixture boils, add $\frac{1}{2}$ bottle liquid pectin, stirring constantly. Bring to a full, rolling boil and boil hard $\frac{1}{2}$ minute. Remove from heat. Skim. Pour quickly. Paraffin. Cool. Put on covers and labels.

HONEY JELLY

Combine 3 cups of strained honey and 1 cup water in a saucepan. Bring to a boil quickly over highest heat. Add $\frac{1}{2}$ bottle liquid pectin, stirring constantly. Bring to a full, rolling boil and boil hard $\frac{1}{2}$ minute; remove from heat; skim. Pour quickly; paraffin at once. Cool. Put on covers and labels.

LOGANBERRY JELLY

Measure 3 quarts loganberries. Crush thoroughly or grind. Place in a jelly bag. Squeeze out juice. Measure 4 cups juice. (If berries lack tartness, substitute $\frac{1}{4}$ cup lemon juice for $\frac{1}{4}$ cup of the juice.) Add $7\frac{1}{2}$ cups sugar; mix. Bring rapidly to a boil over highest heat. Add 1 bottle liquid pectin, stirring constantly. Bring to a full, rolling boil and boil hard for $\frac{1}{2}$ minute. Remove from heat. Skim. Pour quickly. Paraffin. Cool. Put on covers and labels.

MARJORAM-LEMON JELLY

Grate the rind from 6 lemons. Squeeze juice from the lemons; measure $\frac{3}{4}$ cup. Combine measured lemon juice, rind and $1\frac{1}{4}$ cups water; let stand 10 minutes; strain. Pour $\frac{1}{2}$ cup boiling water over 1 tablespoon marjoram; cover; let stand 15 minutes; strain. Combine $2\frac{1}{2}$ cups lemon juice mixture, $\frac{1}{2}$ cup marjoram infusion and 6 cups sugar; mix well. Bring to a boil quickly, over highest heat. Add 1 bottle liquid pectin, stirring constantly. Bring to a full, rolling boil, and boil hard for $\frac{1}{2}$ minute. Remove from heat. Skim. Pour quickly. Cool. Put on covers and labels.

MINT JELLY

Wash fresh mint; measure 1 cup, packing firmly; crush. Add $\frac{1}{2}$ cup cider vinegar, $3\frac{1}{2}$ cups sugar and 1 cup water; mix well. Bring to a boil quickly over highest heat. While mixture is coming to a boil, add enough vegetable coloring to tint mixture a deep green. When mixture boils, add $\frac{1}{2}$ bottle liquid pectin, stirring constantly. Bring to a full, rolling boil; boil hard $\frac{1}{2}$ minute. Remove from heat; skim. *Strain* into glasses. Paraffin. Cool. Put on covers and labels.

ORANGE JELLY

Squeeze 6 medium oranges and 4 medium lemons; combine juices; strain. Measure $2\frac{1}{2}$ cups juice. Add $4\frac{1}{2}$ cups sugar. Bring to a boil quickly over highest heat. When mixture boils, add $\frac{1}{2}$ bottle liquid pectin, stirring constantly. Bring to a full, rolling boil and boil hard for $\frac{1}{2}$ minute. Remove from heat. Skim; pour quickly. Paraffin. Cool. Put on covers and labels.

PEACH AND PLUM JELLY

Stone 2 pounds peaches; do not peel. Add 1 pound plums (do not peel or pit). Crush thoroughly. Add $\frac{1}{4}$ cup water. Bring to a boil; cover; simmer 10 minutes. Place in a jelly bag; squeeze out juice. Measure $3\frac{1}{2}$ cups juice. Add $\frac{1}{2}$ cup strained lemon juice and 7 cups sugar; mix well. Bring to a boil quickly over highest heat. When mixture boils, add 1 bottle liquid pectin, stirring constantly. Bring to a full, rolling boil and boil hard for $\frac{1}{2}$ minute. Remove from heat. Skim. Pour quickly. Paraffin. Cool. Put on covers and labels.

PINEAPPLE-RHUBARB JELLY

Pare 1 medium, fully ripe pineapple; put through food chopper, using fine knife. Cut $1\frac{1}{2}$ pounds red-stalked rhubarb in 1-inch pieces (do not peel). Put through food chopper. Combine pineapple and rhubarb; place in jelly bag; squeeze out juice. Measure 3 cups juice. Add $6\frac{1}{2}$ cups sugar; mix well. Bring rapidly to a boil over highest heat. Add 1 bottle liquid pectin, stirring constantly. Bring to a full, rolling boil and boil hard for $\frac{1}{2}$ minute. Remove from heat. Skim. Pour quickly. Paraffin. Cool. Put on covers and labels.

PLUM JELLY

Crush 4 pounds sour plums thoroughly. (Do not peel or pit.) Add 1 cup water. Bring to a boil. Cover; simmer 10 minutes. Place in

jelly bag; squeeze out juice. Measure 4 cups (if sweet plums are used, substitute $\frac{1}{2}$ cup strained lemon juice for $\frac{1}{2}$ cup plum juice). Add $7\frac{1}{2}$ cups sugar; mix well. Bring to a boil quickly, over highest heat. When mixture boils, add $\frac{1}{2}$ bottle liquid pectin, stirring constantly. Bring to a full, rolling boil and boil hard for $\frac{1}{2}$ minute. Remove from heat. Skim. Pour quickly. Paraffin. Cool. Put on covers and labels.

QUINCE JELLY

Weigh 3 pounds quinces. Remove cores, blossom ends and stem ends. Do not peel. Put through food chopper, using fine knife. Add $4\frac{1}{2}$ cups water. Bring to a boil; cover; simmer 15 minutes. Place in jelly bag; squeeze out juice. (If juice lacks tartness, add 2 tablespoons strained lemon juice.) Measure $4\frac{1}{2}$ cups juice. Add $7\frac{1}{2}$ cups sugar. Mix well. Bring to a boil quickly, over highest heat. When mixture boils, add $\frac{1}{2}$ bottle liquid pectin, stirring constantly. Bring to a full, rolling boil and boil hard for $\frac{1}{2}$ minute. Remove from heat. Skim. Pour quickly. Paraffin. Cool. Put on covers and labels.

RED RASPBERRY JELLY

Measure 3 quarts red raspberries. Crush thoroughly or grind. Place in a jelly bag. Squeeze out juice. Measure 4 cups juice. (If berries lack tartness, substitute $\frac{1}{4}$ cup lemon juice for $\frac{1}{4}$ cup of the juice.) Add $7\frac{1}{2}$ cups sugar; mix. Bring rapidly to a boil over highest heat. Add 1 bottle liquid pectin, stirring constantly. Bring to a full, rolling boil and boil hard for $\frac{1}{2}$ minute. Remove from heat. Skim. Pour quickly. Paraffin. Cool. Put on covers and labels.

RHUBARB JELLY

Cut 3 pounds fully ripe red-stalked rhubarb into 1-inch pieces (do not peel). Put through food chopper, using fine knife. Place in jelly bag; squeeze out juice. Measure $3\frac{1}{2}$ cups juice. Add $7\frac{1}{2}$ cups sugar; mix well. Bring to a boil over highest heat. When mixture boils, add 1 bottle liquid pectin, stirring constantly. Bring to a full, rolling boil and boil hard for $\frac{1}{2}$ minute. Remove from heat. Skim. Pour quickly. Paraffin. Cool. Put on covers and labels.

STRAWBERRY JELLY

Measure 3 quarts strawberries. Crush thoroughly or grind. Place in a jelly bag. Squeeze out juice. Measure 4 cups juice. (If berries lack tartness, substitute $\frac{1}{4}$ cup lemon juice for $\frac{1}{4}$ cup of the juice.) Add $7\frac{1}{2}$ cups sugar; mix. Bring rapidly to a boil over highest heat. Add 1 bottle liquid pectin, stirring constantly. Bring to a full, rolling

boil and boil hard for $\frac{1}{2}$ minute. Remove from heat. Skim. Pour quickly. Paraffin. Cool. Put on covers and labels.

YOUNGBERRY JELLY

Measure 3 quarts youngberries. Crush thoroughly, or grind. Place in a jelly bag. Squeeze out juice. Measure 4 cups juice. (If berries lack tartness substitute $\frac{1}{4}$ cup lemon juice for $\frac{1}{4}$ cup of the juice.) Add $7\frac{1}{2}$ cups sugar; mix. Bring rapidly to a boil over highest heat. Add 1 bottle liquid pectin, stirring constantly. Bring to a full, rolling boil and boil hard for $\frac{1}{2}$ minute. Remove from heat. Skim. Pour quickly. Paraffin. Cool. Put on covers and labels.

RECIPES FOR JELLY, USING POWDERED PECTIN

The method for making jelly with powdered pectin differs slightly from the method using liquid pectin. Be sure to follow directions exactly.

In general, the steps in making jelly with powdered pectin may be summarized as follows:

1. Prepare juice.
2. Strain, squeezing bag (if dripped juice is preferred, use twice the amount of fruit called for in the recipe).
3. Measure sugar; set aside.
4. Measure juice into saucepan.
5. Place juice over highest heat. Add powdered pectin, bring to a boil, stirring constantly.
6. As soon as mixture boils hard, add sugar, stirring constantly.
7. Bring to a full, rolling boil, stirring constantly. Boil hard exactly $\frac{1}{2}$ minute.
8. Remove from heat; skim; pour at once.
9. Paraffin immediately. Cool.
10. Put on covers and labels.

Sugar substitutes. In time of sugar shortages, light corn syrup may be substituted for one-half of the sugar called

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for in a recipe for jelly made with powdered pectin. For each cup of sugar omitted, use 1 cup light corn syrup.

BLACKBERRY JELLY

Measure 2 quarts fully ripe berries. Crush thoroughly or grind. Place in jelly bag; squeeze out juice. Measure 3 cups. Measure 4 cups sugar; set aside. Place juice over highest heat. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring; bring to a full, rolling boil and boil hard $\frac{1}{2}$ minute. Remove from heat; skim; pour quickly. Paraffin at once. Cool. Put on covers and labels.

BOYSENBERRY JELLY

Measure $2\frac{1}{2}$ quarts fully ripe berries. Crush thoroughly or grind. Place in jelly bag; squeeze out juice. Measure $3\frac{1}{2}$ cups. Measure $4\frac{1}{2}$ cups sugar; set aside. Place juice over highest heat. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring; bring to a full, rolling boil and boil hard $\frac{1}{2}$ minute. Remove from heat; skim; pour quickly. Paraffin at once. Cool. Put on covers and labels.

CHERRY JELLY

Weigh $2\frac{1}{2}$ pounds fully ripe sour red cherries. Stem and crush; do not pit (several pits should be crushed). Add $\frac{1}{2}$ cup water; bring to a boil; simmer 10 minutes. Place in jelly bag; squeeze out juice. Measure 3 cups. Measure 4 cups sugar; set aside. Place juice over highest heat. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring; bring to a full, rolling boil and boil hard $\frac{1}{2}$ minute. Remove from heat; skim; pour quickly. Paraffin at once. Cool. Put on covers and labels.

CHERRY AND BLACK RASPBERRY JELLY

Weigh $1\frac{1}{2}$ pounds fully ripe sour red cherries; combine with 1 quart black raspberries, crushed thoroughly. Add $\frac{1}{2}$ cup water. Bring to a boil; cover; simmer 10 minutes. Place in jelly bag; squeeze out juice. Measure 3 cups juice. Measure 4 cups sugar; set aside. Place juice over highest heat. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring; bring to a full, rolling boil and boil hard

$\frac{1}{2}$ minute. Remove from heat; skim; pour quickly. Paraffin at once. Cool. Put on covers and labels.

CURRENT MINT JELLY

Measure 3 quarts red currants. Crush thoroughly. Add 1 cup water; bring to a boil; cover; simmer 10 minutes. Place in jelly bag; squeeze out juice. Measure 6 cups juice. Measure $6\frac{1}{2}$ cups sugar; set aside. Place juice over highest heat. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring, bring to a full, rolling boil and boil hard $\frac{1}{2}$ minute. Remove from heat. Add 1 teaspoon spearmint extract. Skim. Pour quickly. Paraffin at once. Cool. Put on covers and labels.

DEWBERRY JELLY

Measure 2 quarts fully ripe dewberries. Crush thoroughly or grind. Place in jelly bag; squeeze out juice. Measure 3 cups. Measure 4 cups sugar; set aside. Place juice over highest heat. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring; bring to a full, rolling boil and boil hard $\frac{1}{2}$ minute. Remove from heat; skim; pour quickly. Paraffin at once. Cool. Put on covers and labels.

LOGANBERRY JELLY

Measure $2\frac{1}{2}$ quarts fully ripe loganberries. Crush thoroughly or grind. Place in jelly bag; squeeze out juice. Measure $3\frac{1}{2}$ cups. Measure $4\frac{1}{2}$ cups sugar; set aside. Place juice over highest heat. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring; bring to a full, rolling boil and boil hard $\frac{1}{2}$ minute. Remove from heat; skim; pour quickly. Paraffin at once. Cool. Put on covers and labels.

PEACH JELLY

Stone $2\frac{1}{2}$ pounds peaches (do not peel); crush thoroughly. Add 1 cup water; bring to a boil; cover; simmer 10 minutes (add a few crushed peach stones during simmering). Place in jelly bag; squeeze out juice. Measure $2\frac{1}{2}$ cups juice. Measure $3\frac{1}{2}$ cups sugar; set aside. Place juice over highest heat. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring; bring to a full, rolling boil

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and boil hard $\frac{1}{2}$ minute. Remove from heat; skim; pour quickly. Paraffin at once. Cool. Put on covers and labels.

PLUM JELLY

Crush 3 pounds fully ripe plums thoroughly (do not peel or pit). Add $\frac{3}{4}$ cup water; bring to a boil; cover; simmer 10 minutes. Place in a jelly bag; squeeze out juice. Measure 3 cups juice. Measure 4 cups sugar; set aside. Place juice over highest heat. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring; bring to a full, rolling boil and boil hard $\frac{1}{2}$ minute. Remove from heat; skim; pour quickly. Paraffin at once. Cool. Put on covers and labels.

RED RASPBERRY JELLY

Measure $2\frac{1}{2}$ quarts fully ripe red raspberries. Crush thoroughly or grind. Place in jelly bag; squeeze out juice. Measure $3\frac{1}{2}$ cups juice. Measure $4\frac{1}{2}$ cups sugar; set aside. Place juice over highest heat. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring; bring to a full, rolling boil and boil hard $\frac{1}{2}$ minute. Remove from heat; skim; pour quickly. Paraffin at once. Cool. Put on covers and labels.

SPICED PLUM JELLY

Crush 3 pounds fully ripe plums thoroughly (do not peel or pit). Add $\frac{3}{4}$ cup water. Bring to a boil; cover; simmer 10 minutes. Place in jelly bag; squeeze out juice. Measure 3 cups juice. Measure 4 cups sugar; set aside. Place juice over highest heat. Add $\frac{1}{2}$ teaspoon each of powdered allspice, cinnamon and cloves. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring; bring to a full, rolling boil and boil hard $\frac{1}{2}$ minute. Remove from heat; skim; pour quickly. Paraffin at once. Cool. Put on covers and labels.

STRAWBERRY JELLY

Measure $3\frac{1}{2}$ quarts fully ripe strawberries. Crush thoroughly or grind. Place in jelly bag; squeeze out juice. Measure 5 cups juice. Measure 7 cups sugar; set aside. Place juice over highest heat. Add 2 boxes powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring; bring to a full, rolling boil and boil hard for $\frac{1}{2}$ minute. Remove from heat; skim; pour quickly. Paraffin at once. Cool. Put on covers and labels.

STRAWBERRY-MINT JELLY

Measure 2 quarts fully ripe strawberries. Crush thoroughly or grind. Place in jelly bag; squeeze out juice. Measure $2\frac{1}{2}$ cups juice. Measure $3\frac{1}{2}$ cups sugar; set aside. Wash $\frac{1}{2}$ cup firmly packed spearmint leaves and stems; place in saucepan; crush. Add juice to mint. Place over highest heat. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring; bring to a full, rolling boil and boil hard $\frac{1}{2}$ minute. Remove from heat; skim; *strain* into glasses through a fine sieve. Paraffin at once. Cool. Put on covers and labels.

YOUNGBERRY JELLY

Measure 2 quarts fully ripe youngberries. Crush thoroughly, or grind. Place in jelly bag; squeeze out juice. Measure 3 cups. Measure 4 cups sugar; set aside. Place juice over highest heat. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring; bring to a full, rolling boil and boil hard $\frac{1}{2}$ minute. Remove from heat; skim; pour quickly. Paraffin at once. Cool. Put on covers and labels.

11

Jams, Marmalades and Conserves

JAM

JAMS are made from whole berries or fruits plus sugar and water, cooked to a soft, jellylike consistency. It is possible to use slightly overripe fruit for jam, but if commercial pectin is not added this overripe fruit must be combined with some that is underripe. Undersized, misshapen fruits, unsuitable for canning, may be used, but this fruit must be entirely free from decay, and bruised spots must be removed.

Sugar is usually added in the proportion of $\frac{2}{3}$ to $\frac{3}{4}$ cup per cup of fruit. It is possible to make jams that are less sweet than this, but this type of jam must be packed in jars and processed in a water-bath canner for 3-5 minutes or it will not keep.

Jam should be made in small batches so that cooking time is short, because flavor and appearance are spoiled if the mixture is cooked too long.

In general, the steps in making jam are as follows:

1. Work with 3-4 quarts of fruit at a time.
2. Wash fruit; cut in small pieces or crush.
3. Add a small amount of water, cook 8-10 minutes.
4. Measure. Add $\frac{2}{3}$ - $\frac{3}{4}$ cup of sugar for each cup of fruit.
5. Boil rapidly, stirring to prevent burning, until the syrup gives a good jelly test and the mixture is thick and clear.

RECIPES FOR PROCESSED JAMS REQUIRING LESS SUGAR

BLACKBERRY JAM

Pick over 3 quarts blackberries; wash thoroughly; crush. Add 3 cups water. Bring to a boil; simmer 8 minutes. Add $2\frac{1}{4}$ pounds sugar.

Stir until sugar dissolves. Boil rapidly until syrup gives a good jelly test. Fill into clean, hot half-pint jars. Partially seal, according to type of jar (Chapter 3). Process in a water-bath canner 5 minutes. Complete seal. Cool, upright, where draft will not strike jars. Label. Store in a cool, dark place.

BLUEBERRY-CURRANT JAM

Pick over and wash 2 quarts blueberries; put through food chopper, using fine knife. Pick over, wash and stem 1 quart red currants. Add 2 cups water to currants; bring to a boil; simmer 10 minutes, put through a fine sieve. Add blueberries to currant juice and pulp. Simmer 5 minutes. Add 2-2½ pounds sugar. Stir until sugar dissolves. Boil rapidly until syrup gives a good jelly test. Fill into clean, hot half-pint jars. Partially seal, according to type of jar (Chapter 3). Process in a water-bath canner 5 minutes. Complete seal. Cool, upright, where draft will not strike jars. Label. Store in a cool, dark place.

CURRANT JAM

Pick over, wash and stem 3 quarts red currants. Place in a deep saucepan. Add 6 cups water. Bring to a boil; simmer 8-10 minutes. Add 3 pounds sugar. Stir until sugar dissolves. Boil rapidly until syrup gives a good jelly test. Fill into clean, hot half-pint jars. Partially seal, according to type of jar (Chapter 3). Process in a water-bath canner 4 minutes. Complete seal. Cool, upright, where draft will not strike jars. Label. Store in a cool, dark place.

GOOSEBERRY JAM

Remove blossom ends and stems from 3 quarts ripe gooseberries; wash thoroughly. Put through food chopper, using fine knife. Add 3 cups water; bring to a boil; simmer 10 minutes. Add 3 pounds sugar. Stir until sugar dissolves. Boil rapidly until syrup gives a good jelly test. Fill into clean, hot half-pint jars. Partially seal, according to type of jar (Chapter 3). Process in a water-bath canner 5 minutes. Complete seal. Cool, upright, where draft will not strike jars. Label. Store in a cool, dark place.

GRAPE JAM

Remove stems from well-ripened grapes. Weigh 5 pounds; wash and pulp (gently press grapes between thumb and fingers, forcing out pulp and seeds, leaving skins comparatively dry). Run skins through food chopper, using fine knife; put in kettle. Add 2½ cups water; bring to

a boil; cover; simmer 30 minutes. Place pulp and juice over heat, simmer until pulp falls to pieces; put through a sieve to remove seeds. Add pulp to cooked skins. Boil until liquid is reduced by about $\frac{1}{2}$. Add 4 cups sugar. Stir until sugar dissolves. Boil until syrup gives a good jelly test. Fill into clean, hot half-pint jars. Partially seal, according to type of jar (Chapter 3). Process in a water-bath canner 5 minutes. Complete seal. Cool, upright, where draft will not strike jars. Label. Store in a cool, dark place.

If crystals form during storage, place jam in saucepan, add 1 tablespoon water, heat to boiling. Cool before serving.

RASPBERRY JAM

Pick over 3 quarts raspberries. Wash thoroughly; do not crush. Add 3 cups water. Bring to a boil; simmer 6 minutes. Add $1\frac{1}{2}$ pounds sugar, stir until sugar dissolves. Boil until syrup gives a good jelly test. Fill into clean, hot half-pint jars. Partially seal, according to type of jar (Chapter 3). Process in a water-bath canner 5 minutes. Complete seal. Cool, upright, where draft will not strike jars. Label. Store in a cool, dark place.

STRAWBERRY JAM

Pick over 3 quarts well-ripened strawberries. Wash thoroughly. Remove caps and stems. Crush all or part of the berries. Add 3 cups water. Bring to a boil; simmer 8 minutes. Add $2\frac{1}{4}$ pounds sugar. Stir until sugar dissolves. Boil until syrup gives a good jelly test. Fill into clean, hot half-pint jars. Partially seal, according to type of jar (Chapter 3). Process in a water-bath canner 5 minutes. Complete seal. Cool, upright, where draft will not strike jars. Label. Store in a cool, dark place.

SUN-COOKED STRAWBERRY JAM

Pick over 3 quarts well-ripened strawberries; wash thoroughly. Remove caps and stems. Crush. Add $2\frac{1}{4}$ pounds sugar. Stir until sugar dissolves. Bring to a boil, stirring constantly as it nears the boiling point. When mixture boils while it is stirred, count time and boil rapidly 1 minute. Pour into shallow enamel pans; skim. Set aside in a sunny window, covered with cheesecloth. Stir a few times each day. At the end of 3 days, fill into clean, hot jars. Partially seal, according to type of jar (Chapter 3). Process in a water-bath canner 5 minutes. Complete seal. Cool, upright, where draft will not strike jars. Label. Store in a cool, dark place.

RECIPES FOR JAM WITHOUT ADDED PECTIN

APRICOT JAM

Wash and pit $2\frac{1}{2}$ pounds ripe apricots (do not peel). Put through food chopper, using fine knife. Measure $5\frac{1}{2}$ cups pulp. Boil pulp and $3\frac{1}{2}$ cups sugar 15 minutes, stirring often. Slice $\frac{1}{2}$ orange very thin, add with 1 cup thinly sliced fresh pineapple. Cook slowly about 45 minutes or until thick, stirring often. Pour into clean, hot glasses. Paraffin. Cool; put on covers and labels.

BAR-LE-DUC

Pick over; wash and stem 4 quarts red currants. Weigh. Weigh out $\frac{3}{4}$ as much sugar as currants. Place currants in kettle; add just enough water to cover bottom of kettle. Bring to a boil. Add half the sugar. Boil 10 minutes. Add remaining sugar. Boil 30 minutes. Pour into clean, hot glasses. Paraffin. Cool; put on covers and labels.

BLACKBERRY JAM

Pick over and wash 4 quarts blackberries. Crush partially. Heat slowly until juice flows freely. Boil rapidly until juice is reduced by about $\frac{1}{2}$. Measure. Add $\frac{2}{3}$ cup sugar for each cup fruit. Stir until sugar dissolves. Boil rapidly until syrup gives a good jelly test. Pour into clean, hot glasses. Paraffin. Cool; put on covers and labels.

BLUEBERRY JAM

Pick over and wash 4 quarts blueberries. Crush partially. Heat slowly until juice flows freely. Boil rapidly until juice is reduced by about $\frac{1}{2}$. Measure. Add $\frac{2}{3}$ cup sugar for each cup fruit. Stir until sugar dissolves. Boil rapidly until syrup gives a good jelly test. Pour into clean, hot glasses. Paraffin. Cool; put on covers and labels.

CRANBERRY-RAISIN JAM

Combine 1 cup seeded raisins and 4 cups water. Cook until liquid is reduced by $\frac{1}{2}$. Add 4 cups washed cranberries and $2\frac{1}{2}$ cups sugar. Stir until sugar dissolves. Boil rapidly until syrup gives a good jelly test. Pour into clean, hot glasses. Paraffin. Cool; put on covers and labels.

CURRANT JAM

Pick over and wash 4 quarts red currants. Crush partially. Heat slowly until juice flows freely. Boil rapidly until juice is reduced by

about $\frac{1}{2}$. Measure. Add $\frac{2}{3}$ cup sugar for each cup fruit. Stir until sugar dissolves. Boil rapidly until syrup gives a good jelly test. Pour into clean, hot glasses. Paraffin. Cool; put on covers and labels.

DAMSON PLUM JAM

Measure 4 quarts damson plums. Halve; remove pits. Break a few pits and add kernels to fruit. Put in a kettle; add enough water to cover bottom of kettle. Heat slowly to boiling point. Simmer 30 minutes. Measure. Add an equal measure of sugar. Stir until sugar dissolves. Simmer $1\frac{1}{2}$ hours, or until syrup gives a good jelly test. Pour into clean, hot glasses. Paraffin. Cool; put on covers and labels.

GOOSEBERRY JAM

Pick over and wash 4 quarts gooseberries. Crush partially. Heat slowly until juice flows freely. Boil rapidly until juice is reduced by about $\frac{1}{2}$. Measure. Add $\frac{2}{3}$ cup sugar for each cup fruit. Stir until sugar dissolves. Boil rapidly until syrup gives a good jelly test. Pour into clean, hot glasses. Paraffin. Cool; put on covers and labels.

GRAPE JAM

Weigh 4 pounds Concord grapes. Remove pulp from skins. Put skins and pulps in separate kettles. Bring pulp to boiling point; press through a sieve. Cook skins in an equal quantity of water until soft. Add skins to pulp. Measure. Add $\frac{1}{2}$ cup sugar for each cup of fruit. Stir until sugar dissolves. Boil rapidly until syrup gives a good jelly test. Pour into clean, hot glasses. Paraffin. Cool; put on covers and labels.

GREEN TOMATO JAM

Wash 4 pounds green tomatoes. Chop rather fine. Add grated rind and juice of 5 lemons, and 2 ounces of green ginger, scraped and minced. Add just enough water to cover bottom of kettle. Simmer 1 hour. Add 3 pounds sugar. Cook until thick. Pour into clean, hot glasses. Paraffin. Cool; put on covers and labels.

LOGANBERRY JAM

Pick over and wash 4 quarts loganberries. Crush partially. Heat slowly until juice flows freely. Boil rapidly until juice is reduced by about $\frac{1}{2}$. Measure. Add $\frac{2}{3}$ cup sugar for each cup fruit. Stir until sugar dissolves. Boil rapidly until syrup gives a good jelly test. Pour into clean, hot glasses. Paraffin. Cool; put on covers and labels.

PEACH JAM

Peel and stone peaches. Weigh out 4 pounds. Add 2 cups water. Simmer until soft. Add 6 cups sugar. Stir until sugar dissolves. Boil rapidly until syrup gives a good jelly test. Pour into clean, hot glasses. Paraffin. Cool; put on covers and labels.

PLUM JAM

Pit green gage plums. Measure 4 quarts. Add 4 cups water. Simmer until soft. Measure. Add $\frac{2}{3}$ cup sugar for each cup fruit. Stir until sugar dissolves. Boil rapidly until syrup gives a good jelly test. Pour into clean, hot glasses. Paraffin. Cool; put on covers and labels.

RASPBERRY JAM

Pick over and wash 4 quarts raspberries. Crush partially. Heat slowly until juice flows freely. Boil rapidly until juice is reduced by about $\frac{1}{2}$. Measure. Add $\frac{2}{3}$ cup sugar for each cup fruit. Stir until sugar dissolves. Boil rapidly until syrup gives a good jelly test. Pour into clean, hot glasses. Paraffin. Cool; put on covers and labels.

RASPBERRY-CURRENT JAM

Wash 4 quarts raspberries. Add 2 cups strained currant juice. Let stand 15 minutes. Simmer 20 minutes. Measure. Add $\frac{2}{3}$ cup sugar for each cup of juice. Stir until sugar dissolves. Boil rapidly until syrup gives a good jelly test. Pour into clean, hot glasses. Paraffin. Cool; put on covers and labels.

SPICED TOMATO JAM

Peel and core 4 pounds firm, ripe tomatoes. Peel, core and dice 2 large sour apples. Tie $\frac{1}{2}$ teaspoon allspice berries and 4 (1-inch) sticks cinnamon in cheesecloth. Combine tomatoes, apples, spices, 4 cups firmly packed brown sugar, 6 tablespoons lemon juice and $\frac{1}{2}$ teaspoon salt. Stir until sugar dissolves. Cook slowly 1 hour or until thick, stirring often. Pour into clean, hot glasses. Paraffin. Cool; put on covers and labels.

STRAWBERRY JAM (THIN)

Hull 2 quarts strawberries. Crush. Add $4\frac{1}{2}$ cups sugar. Heat quickly to boiling point, stirring until sugar dissolves. Boil rapidly until clear and syrup gives a good jelly test. Pour into clean, hot glasses. Paraffin. Cool; put on covers and labels.

STRAWBERRY-RHUBARB JAM

Wash strawberries; hull. Measure 1 quart. Cut 1 pound red-stalked rhubarb in $\frac{1}{2}$ -inch lengths; combine strawberries and rhubarb. Add 1 cup water; bring slowly to a boil; simmer until soft. Add 4 cups sugar; stir until sugar dissolves. Boil rapidly until syrup gives a good jelly test. Pour into clean, hot glasses. Paraffin. Cool; put on covers and labels.

WILD BLACKBERRY JAM

Wash and pick over 2 quarts wild blackberries. Crush. Bring to a boil; simmer 10 minutes. Force through a sieve to remove seeds. Measure pulp. Add an equal measure of sugar. Stir until sugar dissolves. Bring to a boil; boil rapidly until a good jelly test results. Pour into clean, hot glasses. Paraffin. Cool; put on covers and labels.

RECIPES FOR JAM WITH LIQUID PECTIN

BLACKBERRY JAM

Grind 2 quarts fully ripe blackberries. Measure 4 cups. Add 7 cups sugar; mix well. Set over highest heat. Bring to a full, rolling boil, stirring constantly. Boil hard 1 minute, stirring constantly. Remove from heat and stir in $\frac{1}{2}$ bottle liquid pectin. Stir and skim 5 minutes. Pour quickly into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

BOYSENBERRY JAM

Grind 2 quarts fully ripe boysenberries. Measure 4 cups. Add 7 cups sugar; mix well. Set over highest heat. Bring to a full, rolling boil, stirring constantly. Boil hard 1 minute, stirring constantly. Remove from heat and stir in $\frac{1}{2}$ bottle liquid pectin. Stir and skim 5 minutes. Pour quickly into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

CHERRY JAM (SOUR RED CHERRIES)

Pit $2\frac{1}{2}$ pounds sour red cherries. Crush thoroughly or grind. Measure 4 cups, packing solidly. Fill last cup up with water if necessary. Measure 7 cups sugar into a large kettle; add cherries. Mix well. Set over highest heat; bring to a full, rolling boil, stirring constantly. Boil hard 1 minute, stirring constantly. Remove from heat; stir in 1 bottle

liquid pectin. Stir and skim 5 minutes. Pour quickly into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

CHERRY JAM (SWEET CHERRIES)

Pit $2\frac{1}{2}$ pounds sweet cherries. Crush thoroughly or grind. Measure $3\frac{3}{4}$ cups, packing solidly. Measure 7 cups sugar into a large kettle. Add cherries and $\frac{1}{4}$ cup lemon juice. Mix well. Set over highest heat; bring to a full, rolling boil, stirring constantly. Boil hard 1 minute, stirring constantly. Remove from heat; stir in 1 bottle liquid pectin. Stir and skim 5 minutes. Pour quickly into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

CURRENT JAM

Wash and stem 2 pounds fully ripe red currants. Crush thoroughly or grind. Measure 4 cups. Add $7\frac{1}{2}$ cups sugar; mix well. Set over highest heat; bring to a full, rolling boil, stirring constantly. Boil hard 1 minute, stirring constantly. Remove from heat; stir in $\frac{1}{2}$ bottle liquid pectin. Stir and skim 5 minutes. Pour quickly into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

DEWBERRY JAM

Grind 2 quarts fully ripe dewberries. Measure 4 cups. Add 7 cups sugar; mix well. Set over highest heat. Bring to a full, rolling boil, stirring constantly. Boil hard 1 minute, stirring constantly. Remove from heat and stir in $\frac{1}{2}$ bottle liquid pectin. Stir and skim 5 minutes. Pour quickly into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

GOOSEBERRY JAM

Wash and stem 2 pounds fully ripe gooseberries. Crush thoroughly or grind. Measure 4 cups. Add $7\frac{1}{2}$ cups sugar; mix well. Set over highest heat; bring to a full, rolling boil, stirring constantly. Boil hard 1 minute, stirring constantly. Remove from heat; stir in $\frac{1}{2}$ bottle liquid pectin. Stir and skim 5 minutes. Pour quickly into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

STRAWBERRY JAM

Grind 2 quarts fully ripe strawberries. Measure 4 cups. Add 7 cups sugar; mix well. Set over highest heat. Bring to a full, rolling boil, stirring constantly. Boil hard 1 minute, stirring constantly. Remove from heat and stir in $\frac{1}{2}$ bottle liquid pectin. Stir and skim 5 minutes.

Pour quickly into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

YOUNGBERRY JAM

Grind 2 quarts fully ripe youngberries. Measure 4 cups. Add 7 cups sugar; mix well. Set over highest heat. Bring to a full, rolling boil, stirring constantly. Boil hard 1 minute, stirring constantly. Remove from heat and stir in $\frac{1}{2}$ bottle liquid pectin. Stir and skim 5 minutes. Pour quickly into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

RECIPES FOR JAM WITH POWDERED PECTIN

BLACKBERRY JAM

Wash and stem 2 quarts fully ripe blackberries. Crush thoroughly or grind. Measure $4\frac{1}{2}$ cups, filling up last cup with water, if necessary. Measure $6\frac{1}{2}$ cups sugar; set aside. Put berries in large kettle; set over highest heat. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring; bring to a full, rolling boil and boil hard 1 minute. Remove from heat; skim. Pour quickly into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

BOYSENBERRY JAM

Wash 2 quarts fully ripe berries; crush thoroughly or grind. Measure $4\frac{1}{2}$ cups, filling up last cup with water if necessary. Measure 6 cups sugar; set aside. Put fruit in large kettle; place over highest heat. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring, bring to a full, rolling boil and boil hard 1 minute. Remove from heat; skim. Pour quickly into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

DEWBERRY JAM

Wash and stem 2 quarts fully ripe dewberries. Crush thoroughly or grind. Measure $4\frac{1}{2}$ cups, filling up last cup with water, if necessary. Measure $6\frac{1}{2}$ cups sugar; set aside. Put berries in large kettle; set over highest heat. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring; bring to a full, rolling boil and boil hard

1 minute. Remove from heat; skim. Pour quickly into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

LOGANBERRY JAM

Wash 2 quarts fully ripe berries; crush thoroughly or grind. Measure $4\frac{1}{2}$ cups, filling up last cup with water, if necessary. Measure 6 cups sugar; set aside. Put fruit in large kettle; place over highest heat. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring, bring to a full, rolling boil and boil hard 1 minute. Remove from heat; skim. Pour quickly into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

PEACH JAM

Peel and stone $2\frac{1}{2}$ pounds fully ripe soft peaches. Crush thoroughly or grind. Measure $3\frac{1}{2}$ cups, filling up last cup with water if necessary. Measure $4\frac{1}{2}$ cups sugar, set aside. Put fruit in large kettle; place over highest heat. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring, bring to a full, rolling boil and boil hard 1 minute. Remove from heat; skim. Pour quickly into clean, hot glasses. Paraffin at once. Cool. Put on covers and labels.

PEAR JAM

Peel and core $2\frac{1}{2}$ pounds fully ripe soft pears. Crush thoroughly or grind. Measure $3\frac{1}{2}$ cups, filling up last cup with water if necessary. Measure $4\frac{1}{2}$ cups sugar; set aside. Put fruit in large kettle; place over highest heat. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring, bring to a full, rolling boil and boil hard 1 minute. Remove from heat; skim. Pour quickly into clean, hot glasses. Paraffin at once. Cool. Put on covers and labels.

RASPBERRY JAM

Wash 2 quarts fully ripe raspberries; crush thoroughly or grind. Measure $4\frac{1}{2}$ cups, filling up last cup with water if necessary. Measure 6 cups sugar; set aside. Put fruit in large kettle, place over highest heat. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring, bring to a full, rolling boil and boil hard 1 minute. Remove from heat; skim. Pour quickly into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

YOUNGBERRY JAM

Wash and stem 2 quarts fully ripe youngberries. Crush thoroughly or grind. Measure $4\frac{1}{2}$ cups, filling up last cup with water, if necessary. Measure $6\frac{1}{2}$ cups sugar; set aside. Put berries in large kettle; set over highest heat. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring; bring to a full rolling boil and boil hard 1 minute. Remove from heat; skim. Pour quickly into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

MARMALADE

In most instances, all of the fruit except seeds and core is used in making marmalade. The finished product contains small pieces of pulp and peel, evenly distributed in a rich jelly.

Less sugar can be used than is generally the case, if marmalade is packed in half-pint jars, partially sealed, processed 3–5 minutes in a water-bath canner and completely sealed.

Unless marmalade is processed, it should be cooled and stirred 5 minutes before putting into glasses, to prevent floating fruit.

RECIPES FOR PROCESSED MARMALADES

APPLE-GINGER MARMALADE

Weigh out $2\frac{1}{2}$ pounds firm, ripe, tart apples. Wash, peel, core and quarter. Put through food chopper using fine knife. Cut 1 lemon in quarters; remove seeds. Put through food chopper with 1 ounce crystallized ginger, using medium fine knife. Combine apples, lemon, ginger, $2\frac{1}{2}$ quarts of water and 1 pound of sugar. Cook until fruit is clear and mixture is reduced to half its original volume. Add another pound of sugar and simmer until mixture is a clear lemon color. Boil rapidly until syrup gives a good jelly test. Fill into clean, hot half-pint jars. Seal partially according to type of jar (Chapter 3). Process in a water-bath canner 5 minutes. Complete seal. Cool, upright, in a place where no draft will strike the jars. Label.

APRICOT-PINEAPPLE MARMALADE

Soak 1 pound dried apricots overnight in 5 cups of water. Drain (save water). Put apricots through food chopper, using fine knife. Cut 1 pound cooked or canned pineapple in small pieces. Measure pineapple juice. Add enough of the water in which apricots were soaked to make 2 cups. Add apricots and pineapple to liquid. Boil 5 minutes. Add 2 pounds sugar. Boil rapidly until syrup gives a good jelly test. Fill into clean, hot jars. Seal partially according to type of jar (Chapter 3). Process in a water-bath canner 5 minutes. Complete seal. Cool, upright, in a place where no draft will strike the jars. Label.

PEACH MARMALADE

Use yellow peaches. Peel; halve; remove stones. Put through food chopper, using coarse knife. Weigh. Measure $\frac{3}{4}$ cup sugar and $\frac{1}{2}$ cup water for each pound of peaches. Dissolve half the sugar in the water; add peaches; simmer 5 minutes. Boil rapidly until peaches are soft. Add remaining sugar; stir until sugar dissolves. Boil rapidly until syrup gives a good jelly test. Fill into clean, hot jars. Seal partially according to type of jar (Chapter 3). Process in a water-bath canner 5 minutes. Complete seal. Cool, upright, in a place where no draft will strike the jars. Label.

PLUM MARMALADE

Wash and stone plums. Do not peel. Put through food chopper, using coarse knife. Weigh. Measure $\frac{3}{4}$ cup sugar and $\frac{1}{2}$ cup water for each pound of plums. Dissolve half the sugar in the water; add plums; simmer 5 minutes. Boil rapidly until plums are soft. Add remaining sugar; stir until sugar dissolves. Boil rapidly until syrup gives a good jelly test. Fill into clean, hot jars. Seal partially according to type of jar (Chapter 3). Process in a water-bath canner 5 minutes. Complete seal. Cool, upright, in a place where no draft will strike the jars. Label.

QUINCE MARMALADE

Wash quinces; peel; core; removing all gritty material around core. Put through food chopper, using fine knife. Weigh 1 pound. Combine 1 pound sugar, 2 cups water and strained juice from 1 lemon; bring to a boil, stirring until sugar dissolves. Add quinces. Boil slowly until syrup gives a good jelly test. Fill into clean, hot jars. Seal partially according to type of jar (Chapter 3). Process in a water-bath canner

3 minutes. Complete seal. Cool, upright, in a place where no draft will strike the jars. Label.

RECIPES FOR MARMALADE WITHOUT ADDED PECTIN

APRICOT MARMALADE

Soak 1 pound dried apricots overnight in 4 cups water. Do not drain. Add 1 cup pineapple juice. Simmer 1 hour. Add 8 cups sugar and 1 cup diced cooked or canned pineapple. Simmer until syrup gives a good jelly test. Cool 5 minutes, stirring often. Fill into clean, hot glasses. Paraffin at once. Cool. Put on covers and labels.

CARROT MARMALADE

Wash, scrape and dice 3 pounds carrots. Cook in boiling water until tender. Cook the carrot liquor down to 1 cup. Peel rind thinly from 5 large lemons. Put carrots and lemon rind through food chopper, using fine knife; add carrot liquor, 6 cupfuls sugar and juice from the 5 lemons. Cook slowly 45 minutes, until mixture is thick, stirring frequently. Cool 5 minutes, stirring often. Fill into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

GRAPEFRUIT MARMALADE

Cut 1 large grapefruit and 3 large oranges in very thin slices. Remove seeds. Cover with 7 cups water; let stand overnight. Boil slowly until tender. Add 3½ pounds sugar. Continue cooking until fruit is clear and syrup gives a good jelly test. Cool 5 minutes, stirring often. Fill into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

LEMON MARMALADE

Measure 1 quart thin, unpeeled lemon slices. Add 3 quarts water. Cook rapidly 20 minutes or until lemon slices are tender, stirring occasionally. Drain; measure liquid; add enough water to make 3 quarts. Return liquid to lemons, with 9 cups sugar; mix well. Cook 2-3 cups at a time until syrup gives a good jelly test. Skim. Cool 5 minutes, stirring often. Fill into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

MARMALADE MELANGE

Wash, peel and core 2 large sour apples and 2 large quinces; dice. Dice 1 pound unpeeled red-stalked rhubarb. Combine fruits with 1

cup seedless raisins. Add 3 cups sugar, 3 tablespoons lemon juice and 1 tablespoon grated lemon rind. Let stand $\frac{1}{2}$ hour. Bring to a boil; cook slowly 30 minutes or until thick, stirring often. Cool 5 minutes, stirring often. Fill into clean, hot glasses. Paraffin at once. Cool; put on labels and covers.

ORANGE MARMALADE

Slice or chop 6 oranges; remove seeds. Measure. Add 3 cups water for each cup fruit. Let stand overnight. Boil slowly until tender. Measure. Add 1 cup sugar to each cup fruit. Cook slowly until syrup gives a good jelly test. Skim. Fill into clean, hot glasses. Cool 5 minutes, stirring often. Paraffin at once. Cool; put on covers and labels.

ORANGE-MINT MARMALADE

Combine 2 cups orange pulp, juice and grated rind of 4 lemons and 1 pound peppermint candy, ground or broken. Cook slowly, stirring often, until thick. Cool 5 minutes, stirring often. Fill into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

ORANGE-PEACH MARMALADE

Peel and stone 2 dozen peaches. Cut in thin slices. Peel 4 oranges; cut peel in thin strips; dice oranges. Combine peaches, oranges, orange rind and $3\frac{1}{2}$ pounds sugar. Let stand overnight. Bring to a boil slowly, simmer gently until syrup gives a good jelly test. Cool 5 minutes, stirring often. Fill into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

ORANGE-QUINCE MARMALADE

Peel and core $3\frac{1}{2}$ pounds quinces. Add $1\frac{1}{2}$ quarts water to peelings and cores; boil until tender; strain through a jelly bag. Chop quinces fine; add to strained juice with the rind of 1 orange chopped fine. Simmer until quinces are tender. Add $4\frac{1}{2}$ pounds sugar and juice of 4 oranges. Simmer $1\frac{1}{2}$ hours, or until syrup gives a good jelly test. Cool 5 minutes, stirring often. Fill into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

PEAR-GINGER MARMALADE

Peel and core 4 pounds pears; dice. Add 4 pounds sugar; simmer 1 hour. Peel 2 lemons; chop rind very fine; combine with $\frac{1}{4}$ pound preserved ginger, also chopped fine. Squeeze the lemons. Add lemon juice, lemon peel and ginger to pears. Simmer 1 hour or until clear

and thick. Cool 5 minutes, stirring often. Fill into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

RHUBARB MARMALADE

Peel 2 oranges and 1 lemon; chop peel fine. Squeeze oranges and lemons; add juice to 4 pounds diced rhubarb with peel and 1 pound seedless raisins. Mix well. Let stand $\frac{1}{2}$ hour. Add 3 pounds sugar; bring to a boil; simmer 1 hour, stirring often, or until syrup gives a good jelly test. Cool 5 minutes, stirring often. Fill into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

THREE-FRUIT MARMALADE

Peel 1 grapefruit, 1 lemon and 1 orange. Add 2 cups water to peel; boil 45 minutes; drain. Repeat twice again. Cut peel in thin strips with scissors. Remove pulp from fruit, free of membrane or seeds. Combine pulp and peel. Weigh. Add 3 times this weight of water; boil 1 hour. Measure. Add an equal measure of sugar. Simmer $1\frac{1}{2}$ hours or until syrup gives a good jelly test. Cool 5 minutes, stirring often. Fill into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

RECIPES FOR MARMALADE WITH LIQUID PECTIN

GRAPEFRUIT MARMALADE

Remove peel in quarters from 2 medium grapefruits. Shave off at least $\frac{1}{2}$ of white part and discard. Cut remaining rind into fine shreds with a very sharp knife. Add $1\frac{1}{2}$ cups water and $\frac{1}{8}$ teaspoon baking soda. Bring to a boil; cover; simmer for just 10 minutes, stirring occasionally. Slip pulp out of fruit. Add pulp and juice to rind and water with 1 cup sugar. Simmer, covered, 20 minutes longer. Measure into a large kettle $3\frac{1}{2}$ cups solidly packed prepared fruit, flooding each cup with juice (or water, if necessary). Add 5 cups sugar. Mix well. Bring to a full, rolling boil over highest heat, stirring constantly. Boil hard 1 minute, stirring constantly. Remove from heat. Stir in $\frac{1}{2}$ bottle liquid pectin. Stir and skim for 5 minutes. Pour quickly into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

ORANGE MARMALADE

Remove peel in quarters from 3 medium oranges and 2 medium lemons. Shave off at least $\frac{1}{2}$ of white part and discard. Cut remaining rind into fine shreds with a very sharp knife. Add $1\frac{1}{2}$ cups water and

$\frac{1}{8}$ teaspoon baking soda. Bring to a boil; cover; simmer for just 10 minutes, stirring occasionally. Slip pulp out of fruit. Add pulp and juice to rind and water with 1 cup sugar. Simmer covered, 20 minutes longer. Measure into a large kettle $3\frac{1}{2}$ cups solidly packed prepared fruit, flooding each cup with juice (or water if necessary). Add 5 cups sugar. Mix well. Bring to a full, rolling boil over highest heat, stirring constantly. Boil hard 1 minute, stirring constantly. Remove from heat. Stir in $\frac{1}{2}$ bottle liquid pectin. Stir and skim for 5 minutes. Pour quickly into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

ORANGE AND GRAPEFRUIT MARMALADE

Remove peel in quarters from 2 medium oranges and 1 small grapefruit. Shave off at least $\frac{1}{2}$ of white part and discard. Cut remaining rind into fine shreds with a very sharp knife. Add $1\frac{1}{2}$ cups water and $\frac{1}{8}$ teaspoon baking soda. Bring to a boil; cover; simmer for just 10 minutes, stirring occasionally. Slip pulp out of fruit. Add pulp and juice to rind and water with 1 cup sugar. Simmer covered, 20 minutes longer. Measure into a large kettle $3\frac{1}{2}$ cups solidly packed prepared fruit, flooding each cup with juice (or water if necessary). Add 5 cups sugar. Mix well. Bring to a full, rolling boil over highest heat, stirring constantly. Boil hard 1 minute, stirring constantly. Remove from heat. Stir in $\frac{1}{2}$ bottle liquid pectin. Stir and skim for 5 minutes. Pour quickly into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

THREE-FRUIT MARMALADE

Remove peel in quarters from 1 medium orange, 1 grapefruit and 1 medium lemon. Shave off at least $\frac{1}{2}$ of white part and discard. Cut remaining rind into fine shreds with a very sharp knife. Add $1\frac{1}{2}$ cups water and $\frac{1}{8}$ teaspoon baking soda. Bring to a boil; cover; simmer for just 10 minutes, stirring occasionally. Slip pulp out of fruit. Add pulp and juice to rind and water with 1 cup sugar. Simmer, covered, 20 minutes longer. Measure into a large kettle $3\frac{1}{2}$ cups solidly packed prepared fruit, flooding each cup with juice (or water if necessary). Add 5 cups sugar. Mix well. Bring to a full, rolling boil over highest heat, stirring constantly. Boil hard 1 minute, stirring constantly. Remove from heat. Stir in $\frac{1}{2}$ bottle liquid pectin. Stir and skim for 5 minutes. Pour quickly into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

RECIPES FOR MARMALADE WITH POWDERED PECTIN

ORANGE MARMALADE

Remove peel in quarters from 5 medium oranges and 1 medium lemon. Shave off at least $\frac{1}{2}$ of white part and discard. Cut remaining rind into fine shreds with a very sharp knife. Add 1 cup sugar, $1\frac{1}{2}$ cups water and $\frac{1}{8}$ teaspoon baking soda. Bring to a boil and simmer, covered, 10 minutes, stirring occasionally. Slip pulp out of fruit. Add pulp and juice to cooked rind. Simmer, covered, 20 minutes longer. Measure $2\frac{1}{2}$ cups sugar. Set aside. Measure $3\frac{1}{2}$ cups prepared fruit, filling up last cup with water if necessary. Set fruit, in large kettle, over highest heat. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring, bring to a full, rolling boil and boil hard 2 minutes. Remove from heat; skim; pour quickly into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

ORANGE-GRAPEFRUIT MARMALADE

Remove peel in quarters from 2 medium grapefruits and 2 medium oranges. Shave off at least $\frac{1}{2}$ of white part and discard. Cut remaining rind into fine shreds with a very sharp knife. Add 1 cup sugar, $1\frac{1}{2}$ cups water and $\frac{1}{8}$ teaspoon baking soda. Bring to a boil and simmer, covered, 10 minutes, stirring occasionally. Slip pulp out of fruit. Add pulp and juice to cooked rind. Simmer, covered, 20 minutes longer. Measure $2\frac{1}{2}$ cups sugar. Set aside. Measure $3\frac{1}{2}$ cups prepared fruit, filling up last cup with water if necessary. Set fruit, in large kettle, over highest heat. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring, bring to a full, rolling boil and boil hard 2 minutes. Remove from heat; skim; pour quickly into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

THREE-FRUIT MARMALADE

Remove peel in quarters from 1 medium orange, 1 medium grapefruit and 1 medium lemon. Shave off at least $\frac{1}{2}$ of white part and discard. Cut remaining rind into fine shreds with a very sharp knife. Add 1 cup sugar, $1\frac{1}{2}$ cups water and $\frac{1}{8}$ teaspoon baking soda. Bring to a boil and simmer, covered, 10 minutes, stirring occasionally. Slip pulp out of fruit. Add pulp and juice to cooked rind. Simmer, covered, 20 minutes longer. Measure $2\frac{1}{2}$ cups sugar. Set aside. Measure $3\frac{1}{2}$

cups prepared fruit, filling up last cup with water if necessary. Set fruit, in large kettle, over highest heat. Add 1 box powdered pectin; mix well; continue stirring until mixture comes to a hard boil. Add sugar at once, stirring constantly. Continue stirring, bring to a full, rolling boil and boil hard 2 minutes. Remove from heat; skim; pour quickly into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

CONSERVES

Conserve are made with two or more fruits. Nutmeats or raisins or both are usually added. Nutmeats should never be added until just before the conserve is removed from the heat. If walnuts are blanched before being added, they will not turn the conserve dark. Drop the walnuts into boiling water and leave them 3-5 minutes. Then plunge into cold water. Almonds, of course, should be blanched so that the skins will slip off easily.

CHERRY CONSERVE (SOUR CHERRIES)

Combine 3 quarts pitted sour red cherries, 1 cup seeded raisins, juice and grated rind of 1 orange and 1 lemon and 7 cups sugar. Stir until sugar dissolves. Simmer until thick, stirring often. Add $\frac{1}{2}$ cup chopped walnuts. Remove from heat. Fill into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

CHERRY CONSERVE (SWEET CHERRIES)

Pit $2\frac{1}{2}$ pounds fully ripe sweet cherries. Crush thoroughly or grind. Measure 4 cups. Measure 7 cups sugar into a large kettle; add cherries, $\frac{1}{2}$ pound chopped, seeded raisins, juice and grated rind of 2 medium lemons. Mix well. Place over highest heat; bring to full, rolling boil; stirring constantly. Boil hard 1 minute, stirring constantly. Remove from heat. Stir in 1 bottle liquid pectin and 1 cup finely chopped walnuts. Stir and skim 5 minutes. Fill quickly into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

CRANBERRY CONSERVE

Cook 1 quart cranberries in just enough water to float them. Cook to a mush. Measure. Add an equal measure of sugar. Add the pulp and grated rind of 3 oranges, and 1 cup seeded raisins. Simmer until very thick, stirring often. Fill into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

CURRANT MEDLEY CONSERVE

Combine 4 cups stemmed red currants, 5 cups gooseberries (stems and blossom ends removed), $2\frac{1}{2}$ cups blackberries and 7 cups sugar. Bring slowly to a boil, stirring until sugar dissolves. Cook until thick, stirring often. Add 2 cups chopped walnuts. Fill into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

DAMSON PLUM CONSERVE

Pit and chop 4 pounds damson plums. Chop 2 oranges; cook 20 minutes in 4 cups water; add to plums. Add 1 cup seedless raisins and 6 cups sugar. Bring to a boil, stirring until sugar dissolves. Cook until thick, stirring often. Add $\frac{1}{2}$ cup chopped pecans. Fill into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

GEORGIA CONSERVE

Peel and stone 14 large peaches; dice. Add 4 pounds sugar and 2 tablespoons grated orange rind. Bring to a boil, stirring until sugar dissolves. Cook until thick, stirring often. Add $\frac{1}{2}$ pound chopped pecans. Fill into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

GINGER-PEACH CONSERVE

Chop 1 pound dried peaches; soak overnight in 4 cups water. Add 1 orange, sliced thin and seeded, 1 cup seedless raisins, $\frac{1}{3}$ cup chopped crystallized ginger, juice of 1 lemon, juice of 1 orange and 2 cups sugar. Bring to a boil, stirring until sugar dissolves. Cook until thick, stirring often. Add $\frac{1}{2}$ cup chopped walnuts. Fill into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

GOOSEBERRY CONSERVE

Remove stems and blossom ends from 2 quarts gooseberries. Add 5 cups sugar, juice and grated rind of 1 lemon and 1 orange. Bring to a boil, stirring until sugar dissolves. Cook until thick, stirring often. Add 1 cup broken walnut meats. Fill into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

GRAPE CONSERVE

Wash and stem 3 quarts ripe Concord grapes. Slip skins from pulp, pressing skins dry. Save skins. Cook pulp until soft; put through a fine sieve. Put skins through food chopper, using fine knife. Combine

pulp, skins, 1 tablespoon grated lemon rind, and $3\frac{3}{4}$ cups sugar. Bring to a boil, stirring until sugar dissolves. Boil rapidly until syrup gives a good jelly test, stirring often. Add $\frac{3}{4}$ cup finely chopped walnut meats. Fill into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

PEACH-ORANGE CONSERVE

Slice 3 oranges thin; cut slices in fourths. Add water to cover; boil $\frac{1}{2}$ hour. Add $1\frac{1}{2}$ cups diced peaches and 4 cups sugar. Bring to a boil, stirring until sugar dissolves. Cook until thick, stirring often. Add 1 cup blanched, shredded almonds. Fill into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

PLUM-WALNUT CONSERVE

Stone 3 pounds plums; quarter. Add 3 pounds sugar and 1 pound seedless raisins. Put 2 seeded oranges through food chopper, using fine knife; add to first mixture. Bring to a boil, stirring until sugar dissolves. Simmer until thick, stirring often. Add $\frac{1}{2}$ pound coarsely broken walnut meats. Fill into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

RAISIN-RHUBARB CONSERVE

Combine 5 cups finely diced rhubarb, 3 cups sugar, juice and grated rind 1 orange and 1 lemon, 1 pound seedless raisins. Bring to a boil, stirring until sugar dissolves. Simmer $1\frac{1}{4}$ hours. Fill into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

STRAWBERRY-RHUBARB CONSERVE

Combine 2 cups diced rhubarb, 1 cup seeded raisins, pulp and grated rind of 2 oranges and 2 cups sugar. Let stand overnight. In the morning, add 1 quart hulled, whole strawberries. Bring to a boil; simmer until thick. Add 1 cup chopped pecans. Fill into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

THREE-FRUIT CONSERVE

Remove seeds from 1 grapefruit and 2 oranges. Put through food chopper, using fine knife. Add strained juice of 1 lemon, 3 pounds sugar and 6 cups cold water. Let stand overnight. Bring to a boil, simmer 2 hours, or until thickened. Add 1 cup chopped pecans. Fill into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

Fruit Preserves and Fruit Butters

RECIPES FOR FRUIT PRESERVES

WHOLE fruit or cut-up fruit can be preserved in heavy sugar syrup. Hard fruits are sometimes cooked in water until tender. The cooking water is then used in making the syrup. Soft, juicy fruits and berries are cooked in syrup from the beginning.

The method is easy. Just cook, stirring gently and often, until the fruit is tender and the syrup thick. Turn into hot, sterilized jars and seal at once.

Especially plump preserves result from allowing the fruit to stand in the syrup overnight. Next morning, reheat to boiling, turn into jars and seal.

BERRY PRESERVES

Wash 6 cups berries (blackberries, boysenberries, loganberries or youngberries). Add 5 cups sugar. Mash a few of the berries to start juice. Bring to a boil quickly. Boil hard 8 minutes. Add $\frac{1}{2}$ cup strained lemon juice. Boil 8 minutes longer, stirring occasionally. Cover and let stand overnight, stirring once in a while during cooling. Fill into hot, sterilized glasses. Paraffin at once. Label.

CURRENT HONEY PRESERVES

Heat 3 cups of strained honey to the boiling point. Add 2 cups large, stemmed red currants. Simmer 5 minutes. Remove currants to 4 hot, sterilized half-pint jars, using a strainer or skimmer. Set jars in a pan of hot water. Simmer honey until fairly thick; pour over currants in jars. Seal at once.

PEAR PRESERVES

Combine $4\frac{1}{2}$ cups sugar and $2\frac{1}{2}$ cups water; boil 10 minutes, stirring until sugar is dissolved. Pare, halve and core 2 pounds of pears; drop into syrup. Add 6 whole cloves, 6 allspice berries, 1 tablespoon seedless raisins and 1 lemon, thinly sliced and seeded. Cook until pears are tender and clear and syrup thick. Pack pears in hot, sterilized half-pint jars. Fill jars with boiling syrup. Seal at once. Cool. Label.

QUINCE HONEY

Peel and core 5 large quinces. Put through food chopper, using fine knife. Combine 10 cups sugar and 2 cups boiling water; boil 5 minutes, stirring until sugar is dissolved. Add quinces; cook 15–20 minutes. Fill into clean, hot glasses. Paraffin at once. Cool; put on covers and labels.

QUINCE PRESERVES

Pare, quarter and core 1 pound quinces. Combine $1\frac{1}{4}$ cups sugar and 4 cups water. Boil 5 minutes, stirring until sugar is dissolved. Add quinces; cook 1 hour. Let stand 24 hours; drain. Add 1 cup sugar to the syrup; bring to a boil; add quinces and simmer until the fruit is clear and the syrup thickened. Let stand overnight; drain. Pack quinces in hot, sterilized half-pint jars. Boil syrup until a good jelly test results; pour into jars and seal at once. Cool. Label.

STRAWBERRY PRESERVES

Wash and hull 2 quarts strawberries. Add $4\frac{1}{2}$ cups sugar. Place over low heat, stirring gently until mixture boils. Boil 6 minutes. Fill, boiling hot, into hot, sterilized half-pint jars. Seal at once. Cool. Label.

RECIPES FOR FRUIT BUTTERS

Fruit butters may be made with the pulp left from jelly-making if only one extraction of juice has been made. Add water to cover pulp; boil 3–5 minutes; rub through a fine sieve. If pulp is too thin, cook until it will round up on a spoon. Or pulp may be made as follows: Wash fruit; remove any decayed spots or blemishes. Cover with water and cook until tender. Rub through a fine sieve. If pulp is thin, cook until it will round up on a spoon.

Measure pulp, made by either of the above methods; add $\frac{1}{2}$ cup sugar to each cup of pulp. Add spices. Cook rapidly, stirring constantly until the butter sheets from a spoon, as in the jelly test. Fill into hot, sterilized jars and seal at once.

Less sugar may be added, but the butter must be processed, in partially sealed jars, in a water-bath canner for 3–5 minutes.

APPLE BUTTER

Wash, peel, core and quarter 5 pounds tart apples. Add 7 cups water; boil until soft (about 10 minutes). Press through a sieve. Boil 2 cups apple cider until reduced to 1 cup, add to pulp with $\frac{3}{4}$ teaspoon ground cloves, 3 teaspoons ground cinnamon, 1 teaspoon ground nutmeg. Mix well. Boil, stirring constantly, until butter sheets from spoon. Pour into hot, sterilized jars. Seal at once. Cool. Label.

GRAPE BUTTER

Wash and stem 5 pounds Concord grapes. Simmer in a little water until tender. Wash and quarter 5 medium cooking apples; cook in a small quantity of water until soft. Press fruits through a sieve; combine in kettle with 3 cups sugar, $\frac{1}{2}$ teaspoon ground cloves, $1\frac{1}{2}$ teaspoons ground allspice, 1 teaspoon ground nutmeg and 1 teaspoon ground cinnamon. Cook rapidly, stirring constantly until butter sheets from spoon. Pour into hot, sterilized jars. Seal at once. Cool. Label.

GREEN GAGE PLUM BUTTER

Wash plums; do not peel or stone. Cook in just enough water to prevent sticking, until soft. Rub through a sieve. Weigh pulp. Add $\frac{3}{4}$ as much sugar as pulp by weight. Simmer until butter sheets from spoon, stirring often. Pour into hot, sterilized half-pint jars. Seal at once. Cool. Label.

PEACH BUTTER

Pit 4 pounds peaches; do not peel. Add 2 cups water; cook until tender. Put through a sieve. Measure. Add $\frac{3}{4}$ cup sugar for each cup of pulp. Add 2 teaspoons ground cinnamon, $\frac{1}{4}$ teaspoon ground cloves and 1 teaspoon allspice. Cook rapidly, stirring constantly, until butter sheets from spoon. Pour into hot, sterilized jars. Seal at once. Cool. Label.

PEAR-HONEY BUTTER

Combine 4 cups cooked pear pulp, 1 cup sugar, $1\frac{1}{4}$ cups honey and 1 tablespoon lemon juice. Cook until thick, stirring often. Pour into hot, sterilized half-pint jars. Seal at once. Cool. Label.

PLUM BUTTER

Cook 4 pounds washed red or blue plums in just enough water to prevent sticking, until soft. Press through a sieve. Measure pulp. Add $\frac{2}{3}$ cup sugar for each cup of pulp. Add spices if desired. Cook rapidly, stirring constantly, until butter sheets from spoon. Pour into hot, sterilized half-pint jars. Seal at once. Cool. Label.

TOMATO BUTTER

Peel and slice 5 pounds tomatoes. Peel, core and slice $1\frac{1}{2}$ pounds sour apples. Combine tomatoes and apples; add 2 cups vinegar, $4\frac{1}{2}$ cups sugar; mix well. Tie the following spices in a bag and add: 2 (1-inch) sticks cinnamon, 2 blades of mace, 12 whole cloves and small piece of ginger root. Cook 3 hours; remove spices; do not sieve. Fill into hot, sterilized half-pint jars. Seal at once. Cool. Label.

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